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***Instigating transformational changes: An
interdisciplinary approach based on the appraisal
theories of emotion***

by

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the degree of

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Declaration

This thesis is the original work of the author, submitted to the university of Warwick in support of the application for the degree of Doctor of Philosophy.

Also, this thesis has not been submitted in whole or in part as consideration for other degree qualification at this or any other university.

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Abstract

Recent research has questioned the commonly accepted notion that transformational changes are instigated when compelling evidence establishes a clear sense of urgency for action. Following these intriguing results, this thesis set out to investigate why some leaders avoid taking action even when a crisis is threatening their systems. For that reason, a sophisticated interdisciplinary approach was designed, which allowed insights from the discipline of psychology and the study field of management to be reviewed and meta-synthesized into a conceptual framework that expands the myopic paradigm of urgency and thereby elaborates the process of change instigation.

The findings suggest that once a crisis is faced, leaders engage in an emotional change process during which the compelling evidence is appraised in reference to business goals and ego-commitments. These appraisals give rise to negative emotions as they inform the individual of the encountered threat. As a result, a self-protective regulatory mechanism is triggered, the operations of which determine the future of subsequent appraisals and thus the response to be adopted. That is, action might be taken to secure business continuation (*adaptive*), or the leader could trigger defence mechanisms (*maladaptive*) and thus respond in ways which might go against organizational interests, but protect the threatened ego.

Although the theorization has not yet been empirically validated, the thesis bears significant contributions to knowledge. It demonstrates that urgency a) is a necessary yet insufficient element of the emotional change process; b) provides a superficial explanation of how transformations are instigated. Its logic is grounded in the outdated assumption that human beings are purely cognitive, cold and rational processors of information. Instead, the suggested framework emphasizes the important role that the unconscious hot cognitions and the emotional experiences play. Ultimately, through the analysis of more than 1200 multi domain sources, this theorization provides a viable alternative to the current urgency paradigm. It facilitates the diagnosis of defensive appraisals and paves the way for the development of tools to assist the agents of change.

1 What does it take to instigate change?

1.1 The diachronic appeal for organizational change

Change always has been one of the most alluring topics for thinkers. Its philosophical emergence dates back between 535 BC and 475 BC, when the ancient Greek philosopher Heraclitus stated that “Everything flows, nothing stands still”. Through his observations in nature, he inferred that the world’s elements naturally change and that nothing should be considered constant (*Osborne, 2003:99*). Since Heraclitus, various thinkers have stressed the importance of perceiving change as part of nature (*Muessig, 1969*), a view that became commonly accepted after the beginning of the 19th century, when “naturalists” changed mankind’s mind-set of a static existence (*Bakerjian, Wick, Benedict and Veilleux, 1993:1-3*). Indisputable proof of the business world not being an exception to this rule is shown by the last decades' increase of change initiatives in business as well as academic research on change (*Mills, Dey & Mills, 2008:11*).

Specifically, the phenomenon took the magnitude of an “epidemic” and authors have written that change has become a fashion in which organizations blindly follow pre-packaged change programmes (*Mills, 2003:88*). Despite the criticism on the discipline and the fallacy of believing in magical best practices for change (*Hallencreutz & Turner, 2011*), companies, as the new change-theory trend advocates, have to consider change as nature’s causality and manage within it (*Brucke, 2006:15*). It is clear that in order to survive and prosper within the contemporary unprecedented pace of change (*By, 2005*) organizations have to infuse a change mentality in their systems, which develops a new role for the academic community. That is, to engage more with organizations in developing new knowledge that will facilitate change and accelerate performance within a turbulent and highly evolving environment (*Mohrman and Lawler, 2012*).

1.2 Research focus: Instigating transformational changes

1.2.1 A dichotomous typology & the planned approach to change

There are many types of organizational change and various ways to categorize them. A widely used typology has been offered by *Burnes (1996)*, who proposed that there are

two general approaches for managing change: planned and emergent (*see also Botten, 2009:501; Erasmus, Van Wyk & Schenk, 2004:731; Farrell, 2000*)¹. As it was depicted above, organizations operate in a continually changing environment, in which stability could be considered as an unforgivable mistake. In that sense flexibility and adaptability to environmental changes, enabled by a continuous improvement philosophy (*Kaye and Anderson, 1998*), is necessary. However, at the same time, issues like, dramatic environmental events, potential opportunities or problems and adverse business results, or even the inadequacy of continuous incremental changes (*Weitzel & Jonsson, 1989*), could make an emergent approach insufficient, and impose the need for radical business changes (*Kelly, 2008:124*). The complementary nature of these approaches is evident (*Burnes, 2004a*) and leaders have to choose how they will manage a potential combination (*Livne-Tarandach & Bartunek, 2009*).

This work neglects the emergent and focuses on the planned approach. There are some special qualities that distinguish this approach to change. *Osborne and Brown (2005:91)* claim that planned changes (PC) are deliberate and linear, and aim to premeditatedly change organizational aspects (*Stickland, 1998:81*). Generally, the main assertion of the PC approach is that an organization's stability is interrupted, most of the times dramatically and externally (*Weick & Quinn, 1999*), by change which is disruptive in nature (*Sharma, 2006:9*). In that sense, and given the fact that PCs are "top-down" driven approaches (*Mehta, 2009:66*), top management's role becomes of major importance. It is their responsibility to anticipate environmental changes and take planned and managed steps, which usually reflect a process (*Levy & Merry, 1986:3*), to face the adversities and prosper when those changes take place (*Banerjee, 1995:294*). However, despite PCs' proactive nature, it should be stated that organizations could react to unanticipated events in a planned manner, which still refers to PC approach (*Lewis, 2011:37*).

1.2.2 Categorize planned change based on their magnitude

There are plenty types of PCs. One key dimension to categorize them is the magnitude of change, which mainly refers to the impact of change in organizations (*Cummings &*

¹ Operational definitions for delimiting the work's basic research-terms and establishing a common understanding (*Any, Jacobs, Sorensen & Razavieh, 2009:35*) concerning change, organizational change and change management can be found in appendix 1.

Worley, 2008:31). According to this dimension, the analysis of various typologies of change depicted that there are three general types of PC, including minor, major and transformational (*table 1*).

Source	Minor Impact	Major Impact	Transformational
<i>Golembiewski, Billingsley, & Yeager, (1976)</i>	Alfa	Beta	Gamma
<i>Keen (1997:127)</i>	Step-Shift	Radical	Fundamental
<i>Anderson & Ackerman (2010:51)</i>	Developmental	Transitional	Transformational
<i>Lorenzi & Riley (2002:182)</i>	Operational	Strategic	Cultural
<i>Huy (2001)</i>	Work Processes	Beliefs	Social Relationships
<i>Harigopal (2006:43)</i>	Directional	Total	
<i>Nadler & Tushman (1989)</i>	Adaptation	Re-creation	
<i>Cummings & Worley (2008:63)</i>	Incremental	Quantum	

Table 1. Types of planned change (*Magnitude Characteristic*)

Transformational changes are essential shifts in organizational philosophy (*Lorenzi & Riley, 2002:182*), which aim to fundamentally change an organization, its culture and practices, as well as the way it sees the world (*Anderson & Ackerman, 2010:51*). Major changes are large-scale changes as well. They require aggressive actions at a strategic level (*Nadler & Tushman, 1989*), but, in contrast to transformational ones, they leave an organization's basic principles intact (*Keen, 1997:127*). Minor changes, on the other hand, are changes at a lower level like in the work processes and operations (*Lorenzi & Riley, 2002:182*), which aim for improvements in productivity and quality (*Huy, 2001*).

1.2.3 The need for transformations as a spark for this research

This work focuses mainly on transformational changes, which have been an area of concern for various management thinkers. A notable example is *Deming (1985)* who opposed the current way of management and preached an urgent appeal for its transformation. His vision was to see a world where malevolent competition would have been replaced by cooperation, so that everybody could win (*Deming, 1992*).

While the specious good results of western world's economy during his era made the realization of the need for transformation difficult (*BBS, 1992*), today's crisis vindicates his argument that Western management needs to change. Similarly, Juran, another quality thinker, could also be considered as a pioneer of management. Unlike Deming, who was a philosopher proposing transformational changes, Juran was a practitioner who tried to teach managers better ways of management in a system familiar to them (*Evans and Lindsay, 2008:107*). His thinking was mainly captured in Juran's trilogy, which, despite the differences in the conceptual steps, is similar to the approach followed for managing finance (*Juran, 1999:2.5*). Despite the less transformational character of his theories, very few companies have embraced them as Japanese did (*Juran as cited in Leitner, 1999*). Apparently improvement as well as refusal to adopt new practices could lie in major changes as well.

Despite the fact that the approach of Japanese management could provide solutions to problems of the previous (*Drucker, 1971*) as well as the current century (*Landesberg, 1999*), the examples, cited above, do not aim to presage a work focusing on its adoption. Yet, these problems demonstrate, what becomes more apparent in our days, that both practices and theories used to manage business need to be rethought (*Ghoshal, 2005*). This need is apparent even to management gurus, who have both “*nourished*” and “*been nourished*” by the current management approaches. For instance, the economic crisis of our system made Porter, a leading western management guru (*Gordon & Turner, 2000:310*), propose that business and academic communities should rethink the way businesses operate (*Porter, 2011*). His main proposition is that companies instead of focusing on profits should create a shared value both for and in cooperation with society. While *Porter's (2011)* recommendations are not as revolutionary as those previously described, they take into consideration the dramatic consequences which resulted in the financial crisis and are expected to lead to changes not only in the private but also the public sector as well (*Diamond & Liddle, 2012*).

Senge, another distinguished Western scholar, proposed a new industrial revolution towards sustainable and innovative business models (*Senge, Carstedt & Porter, 2001*). He developed the five disciplines of a learning organization and conceptualized them in a model for transforming a traditional organization into a learning one (*Senge, Ross, Bryan, Roberts & Kleiner, 1994:45*). According to Senge (*1993*), management thinking should be transformed with the aim of developing and managing such organizations,

which are believed to be the only ones that can survive within the contemporary turbulent environmental conditions (*Limerick, Passifield & Cunningham, 1994*). Despite the phenomenally different approach, his ideas have been widely influenced by Deming (*Senge, 2006:xi*), and arguably could constitute a breakthrough for current management practices, which unfortunately has not yet occurred. Ultimately, theoretical advancements like the previous, along with many more that exist in the literature or developed in practice, can improve business performance and lead organizations and systems towards a sustainable path. The big question then, which also developed the inaugural idea for this work, is “why are there not more companies like that?” (*Moreno & Gitlow, 1999*).

1.3 Instigating change: The current Paradigm

1.3.1 A review of process based change models

The call from various thinkers for change that has been discussed above gives a perspective to problems with PCs other than the investigation of potential causes of failure during the change process (*i.e. Eaton, 2010; Lucey, 2008*). That is, it orientates the research’s focus a step “before” the very beginning of the PC effort and triggers the interest in identifying how transformational and major changes can be instigated in first place. In this respect, *Ranjekar (2007)* argued that it is not clear what induces large scale change in nations. Similarly, in organizational settings there are many ways in which the existing equilibrium can be disrupted and, consequently, a period of transformational change be initiated (*Gersick, 1991*). Nevertheless, no matter what the exact trigger might be (*see. Tushman, Newman, & Romanelli, 1986*) the core question within the scope of this research concerns how this trigger is realized as well as cognitively (*see below*) treated in regard to the initiation of a PC process. Ultimately, an appropriate basis from which, to commence this research is a holistic review of the existing PC models’ initial steps in order to identify what is recommended for instigating change.

As it can be seen in the following table, twenty-three models were identified, many of which have been developed under the umbrella of Organizational Development (OD). It should be noted that OD is, also, described as a form of PC (*Burke and Bradford 2005:10*), the primary aim of which is to understand and facilitate the process of PC in organizations (*Marshak, 2005:21; Macredie & Anketell, 1998:7*). Since it is widely

accepted that OD is synonymous to PC (Amado & Amato, 2001:38; Kondalkar, 2009:3; Margulies & Raia, 1978:51; Ramanathan, 2009:30), it was decided that theories referring to it are indeed related to the needs of this work and, therefore, they were included in the literature review.

Model	Year	“Urgency” step in each model	Reference
Lewin's 3 step model	1947	Step 1: Unfreeze "Felt Need"	Lewin (1947:210)
The Phases of planned change	1958	Phase 1: The development of a need for change	Lippit, Watson & Westley (1958:131)
The organizational-change process	1969	Stage 1: Diagnosis (Realize potential Need/Problem)	Lawrence & Lorch (1969:85)
Dynamic Seven-stage model	1970	Step 1: Scouting	Kold & Frotiman (1970)
A model for organizational Development	1976	Stage 1: Anticipate a need for change	Donald (2006:14)
Beckhard & Harris Change model	1977	Step 1: Defining the need for change	Beckhard & Harris (1977:17)
The CAP – General Electric (GE)	80s	Step 2: Creating a Shared Need (<i>after appointing the change leader</i>)	Developed by Crontoville Company Garvin (2003:127)
Enhanced Planning Model	1985	Change Process 1: Need Awareness	Bullock & Batten (1985)
The critical path to change	1990	Step 1: Mobilize Commitment to change through Joint Identification of Business Problems	<i>Beer, Eisenstat, & Spector (1990)</i>
10 Commandments for change	1991	Step 1: Analyse the organization and its need for change Step 4: Create a sense of Urgency	Jick (1991, in Jick & Peiperl 2011:216)
General Model of OD	1993	Step 1: Entering and Contracting	Cummings & Worley (1993, in 2008:58)
Kotter 8 Step	1996	Step 1: Create a sense of Urgency	Kotter (1996:35)

The change management process model	1996	Step 1: Establish the need to change	Galpin (1996)
A Process model for change	1998	Step 1: Recognition (<i>of the need</i>) Step 2: Translate the need for change into a desire for change	Hayes (2007:82)
A framework for change	2002	Step 1: The idea and its context	Mento, Jones & Dirndorfer, (2002)
7-steps to Change	2003	Step 1: Mobilize Energy and Commitment through Joint Identification of Business Problems & Their Solutions	Luecke (2003:33)
Leading Change model	2006	Phase 1: Create a Felt need for change	Russell & Russell (2006:48)
C-H-A-N-G-E	2007	Phase 1 Challenge the current status	Biech (2007:31)
The ICBERG approach	2007	Phase 1: Identify the need	Mishra (2007)
Carter's model	2008	Phase 1: Set Up for Success Phase 2: Create Urgency	Carter (2008)
A framework for change management	2010	Step 2: Establish a sense of urgency (<i>after assessing readiness</i>)	Varkey & Antonio (2010)
The action research model	2011	Step 1: Scouting Sub Step 1: Awareness of a Need for Change	Swaim (2011:198)
Steps in Leading & Managing Change	2011	Step 1: Understand the need for change Step 4: Create a sense of urgency	Ensaola & Atchley (2011:54)
Recipe for Strategic Change	2012	Step 1: Establish Urgency for True Current Position	Metzer & Vogel (2012)

Table 2. Analysis of Change Models in their initial steps

Logically, this number of models would entail variation regarding the necessary initial steps. Thus, it was essential to proceed to a deeper analysis in order to identify

similarities and differences between the models, as well as trends that have been developed throughout the years. For that reason, the coding process, which enabled isolation of the most important phrases within these steps was utilized (*Burnard, 1991*). More precisely, patterns were identified and therefore the affinity process (*Cowley & Domb, 1997:170*) was utilized to compile the phrases back into groups (*app.2*). Afterwards, the groups were linked with the change models themselves in order to facilitate further analysis. The results of this process are demonstrated in *table 3* and will be discussed in the following section.

1.3.2 Analysis of the change models' steps

In general, PC models support, some more explicitly than others, that awareness of a need or a problem is the first and essential step for a change program's initiation. Everything starts when someone, at or near the organization's top, identifies and then demonstrates to top management the need for change with the aim of persuading them to initiate it (*Biech, 2007:31*). The main premise is that the development of this "felt need" is the only moving force necessary to convince individuals to initiate change (*Donald, 2006:14*). Some authors propose that the essential awareness of the need should be followed by both a good diagnosis of the conditions ringing the bell for change and the formalization of an articulate visionary state (*Beckhard & Harris, 1977:17*). In that sense change leader(s) should translate the symptoms into a coherent picture of problems, prioritize them and, given the constraints and potentials of the current state (*Mishra, 2007*), start building their solution plan (*Lawrence & Lorch, 1969:85*). Then the vision is developed and the leading team both creates a sense of urgency among business's population and proposes solutions, so that employees will accept change (*Ensaola & Atchley, 2011:54*).

Different approaches contradict the previous order. The GE change model suggests that before the vision is created, the need for change should be both disseminated and understood by everyone within the organization (*Garvin, 2003:125*). The aim of this shared "felt need" should be to reduce resistance to change (*Fulmer and Goldsmith, 2000:71*) and capture people's attention by creating a sense of urgency (*Russell & Russell, 2006:48*). Authors have also proposed that the first step should be to enable a common diagnosis of the problem in order to foster the initial necessary commitment throughout the organization (*Beer, et al. 1990*). It has been argued that by letting people

wonder “why” and identify the reason for change a sense of urgency among the population will be developed (Luecke, 2003:33).

	Identifying the Compelling	Diagnosing & Analysing the Compelling Need	"Unfreeze" - Eliminate Inertia	Disseminate the Compelling Need & Increase Awareness	Infuse & Establish Urgency	Enforcing the Compelling Need	Subjective sense of Need	Requires Desire for change
Lewin's 3 step model	X		X					
The Phases of planned change	-		X	X				X
The organizational change process	-	X						
Dynamic Seven-stage model	X							
A model for OD	X							
Beckhard & Harris Change model	-	X						
The CAP – General Electric (GE)	-			X				
Enhanced Planning Model	X							
The critical Path to change	-	X						
10 Commandments for change	-		X		X	X		
United Model for OD	-	X		X			X	
Kotter 8 Step	-		X	X	X	X		
The change management process model	-			X				
A process model to change	X							X
A framework for change	-	X						
7-steps to Change	-	X			X	X		
Leading Change model	-		X	X	X			
C.H.A.N.G.E.	X							
The ICEBERG approach	-	X						
Carter's model	-	X			X			
A framework for change management	-				X	X		
The action research model	X							
Steps for Leading & Managing Change	-				X	X		
Recipe for Strategic Change	-				X			
Times (Out of 24)	7	8	5	6	8	5	1	2

Table 3. Matrix Analysis of Planned Change Models²

² The symbol “X” indicates that the models mentions element. On the other hand, the symbol “-” indicates that the element is implied.

In every approach, identified in the literature, urgency seems to play a dominant role as an initial step. *Jick (1991, as cited in Jick, 2011:216)* seems to be the first one who introduced the concept of urgency as a step after the development of the vision and mainly focuses on the lower levels within the organization. However, *Kotter (1995)* highlighted the idea and constituted urgency as the major step in the change process. After his model (*Kotter, 1996:21*), which is probably the most reputable and influential step-oriented model in organizational change (OC) literature (*Dunford & Palmer, 2010:366; Lambert, 2008:431; Periyakoil, 2009*), urgency was established as a major and inextricable initial step in the vast majority of change models. Indeed, according to *Kotter (2008:13)* it has to take place at the very beginning of every change program, even before a vision's creation (*Kotter & Cohen, 2002:27*), and places its poor development as the number one reason for the existence of unsuccessful change efforts.

Essentially, the aim of urgency is to overcome the problems of inertia and complacency. According to *Kotter (1996:35)*, business as usual is not easy when there is fire in the place, since resistance might be reduced when people face a crisis (*Daft & Marcic, 2009:306*), like a bankruptcy (*Jick, 2011:216*). However, waiting for the fire is not the best practice and therefore change leaders should create crisis in order to push the urgency levels up (*Kotter, 2008:142*). The main concept is to disseminate throughout the organization a compelling reason for change by demonstrating dramatic and tangible evidence that both point to a new business direction and convince people that change is necessary to overcome the problems with the current paradigm (*Varkey & Antonio, 2010*). Even though the idea of creating an artificial crisis has been critically, morally and ethically challenged as well as characterized as a dishonest action (*By, Hughes & Ford, 2016*), the concept of urgency inspired authors to develop identical approaches (*i.e. Metzger & Vogel, 2012*) and state that change will not happen without urgency (*Luecke's, 2003:33*).

1.3.3 A combined approach of change's initiation steps

The review indicates that authors agree on what has been proposed by the so called father of PC *Lewin (Pathak, 2011:327)*, that a "felt need" is an essential requirement for a change to take place (*Burnes, 2004b*). This felt need, in later models, is translated as a compelling need or reason, and its existence is mainly understood when the organization and its people experience a sense of urgency (*Kotter, 1996:35*). Despite the agreement, though, before any attempt to provide a common approach based on the

models, differences concerning when and where urgency should take place require clarification. More precisely, some models support that urgency should start from the higher levels of an organization (*i.e. Ensaola & Atchley, 2011:54*). In their view leaders analyse the environment and realize the compelling need, create a guiding coalition and a vision, and then develop urgency among employees and change recipients. Slightly different seems to be GE's model (*Garvin, 2003:127*), which places the dissemination of the need first. However, this dissemination is only for capturing people's attention in the first place and clearly doesn't signify any difference in the underpinning logic that wants leaders to initiate the process.

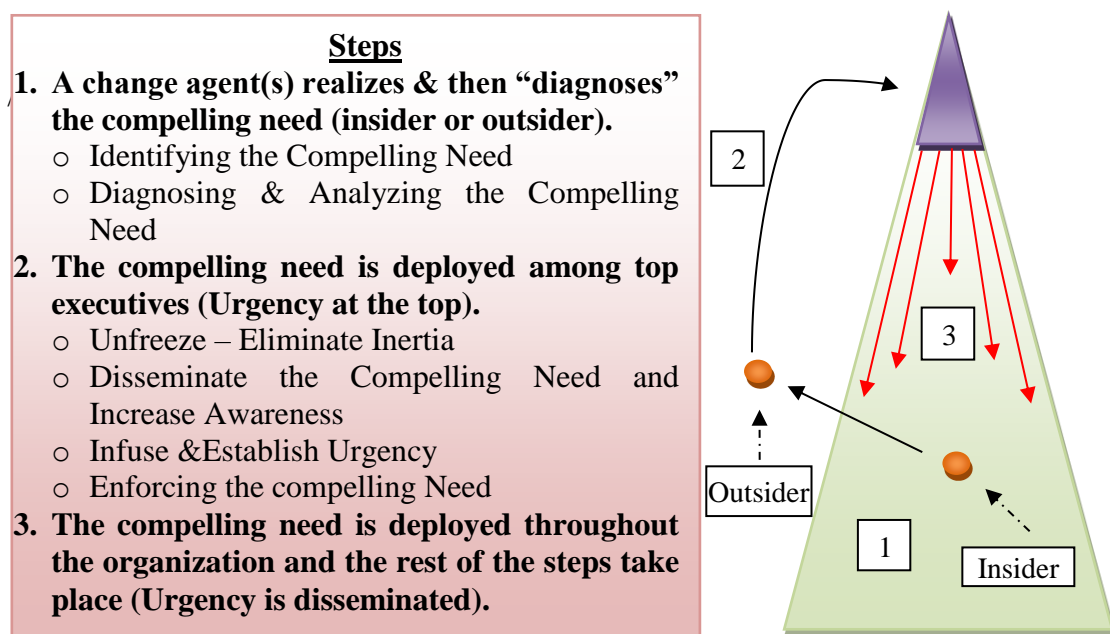


Figure 1. Change's Initiation Steps

Despite their slight differentiations, these approaches hide a widely accepted, and probably dangerous assumption for profound changes (*Senge, 1999:10*), that leaders are aware of everything that needs to be done and that such awareness is missing from lower levels (*Bartunek, Balogun & Do, 2011*). It might be true that the necessary power and holistic view for a change to occur lie most of the times at the top (*Kotter & Heskett, 1992:89*). Yet, this doesn't mean that either the spark for change or the solutions to a problem are always possessed by top leaders and key actors (*By, Burnes, & Oswick, 2011; refer to sec. 8.3 for further elaboration on this point*). By extension, the current work accepts recent theorizations according to which the realization of a need to change may occur at any level of the organization (*Moon, 2008; Piderit, 2000*). Based on this

argument, *figure 1* demonstrates the necessary steps for a PC to occur, as well as their sub-steps which constitute elements identified in the change models (*table 2*).

While, philosophically speaking and mainly given an inside perspective, “*a system cannot understand itself*” (*Deming, 1994:92*), stability is not inevitable. There are and always have been individuals, belonging to the world’s minority, who profoundly question everything and chase to develop improved conditions. These individuals transform themselves from insiders to outsiders who due to their quality of being detached from the current status quo (*Johnson, 1992*) can realize the need for change (*step 1*). In the context of this work they will be called, change advocates (*following Conner, 1993 terminology*), and they could be external, for example a consultant or a university’s member who analyses a company’s specific problem, or an unconventional internal one (*Kotter & Heskett, 1992:91*) coming from any level within the organization. The change advocate, or the team of advocates, could either have a specific recommendation, which may be revised later on, or could have only a sense of what should be done, which will require a deeper diagnosis of the need in subsequent steps. Nevertheless, in both cases and given the top driven nature of PCs (*Mehta, 2009:66*), the change advocate has to deploy the compelling need to the executive level to persuade them to authorize change (*step 2*). Then, the compelling need has to be spread throughout the organization (*step 3*), and the rest of the steps should follow (*Kotter, 1996:21*).

1.4 Contextualizing the problem: The individual perspective

George Bernard Shaw argued that the first step to change anything is to change your mind (*Malhotra, 2005:42*). In PCs this phrase acquires vast credibility, since in order for a change to occur, leaders have to change their beliefs regarding the status quo (*Unfreeze in Lewin, 1947:210*) and authorize it in first place. In that view this research, whereas it is about OC, should unfold on an individual-based perspective, and, for that reason, the Transtheoretical Model (*TTM*), which is considered to be the most important (*Samuelson, 1997*) and popular (*Sharma & Romas, 2011:98*) individual change model, was utilized. While its primary focus is on changing behavioural problems and promoting healthier habits (*DiClemente & Hughes, 1990; DiClemente & Prochaska, 1982; Prochaska, et al. 1994; Prochaska, DiClemente & Norcross, 1992*), it has been argued that its individual stage-matched perspective could provide a better insight in OC efforts (*Prochaska, Prochaska & Levespue, 2001*). Indeed, *Whelan-Berry, Gordon,*

& Hinnings (2003) argued, after their research of an actual case, that the model facilitated understanding of the PC process.

The model consists of five stages, but the focus of this research is on the first four (fig.2). That is to say from pre-contemplation, where the leader is unaware or ignores the need for change, till the very first point of action stage (*red line in fig.2*), where the leader modifies his thinking and is ready to initiate change (Prochaska, DiClemente & Norcross, 1992). The reason why this work doesn't include the entire action step is because there could be factors, like increased costs or insufficient resources (Lehman, Greener & Simpson, 2002), which, despite leaders' desire to change, could cause issues with the change process. Those kinds of factors lie beyond this work's scope since the main focus is on the barriers that prevent leaders from accepting and committing to change which come before the assessment of a company's readiness for change at employee level and, the dynamically linked with this readiness, reshaping capabilities (refer to Jones, Jimmieson & Griffiths, 2005).

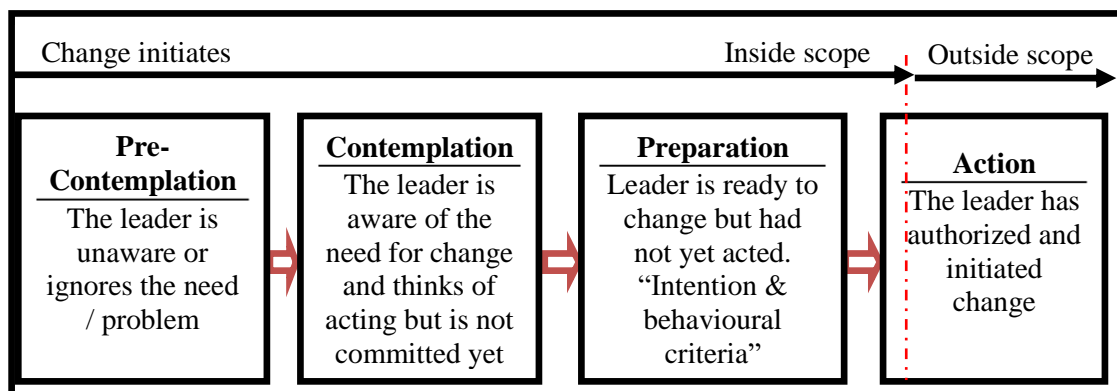


Figure 2. TTM for Leaderships' mental shift

The steps recommended by TTM have been adapted in order to reflect the needs of this work. West (2005) argues that model's stages are not clearly separated and suggests that someone has to drop dividing lines among them in order to categorize individuals into the stages. For eliminating this problem, which actually was faced during the construction of the adapted model, specific time attributes, according to which the model categorizes individuals to stages, have not been taken into consideration. Instead, the general idea behind the steps has been used and the logic of the model's specific application to PCs has been adopted (Matheny, 2005; Whelan-Berry, Gordon, & Hinnings, 2003), in order to present and analyse the fallacies that are suggested within the scope of this work.

At this stage, it is essential to clarify that the scope of this research is restricted to the investigation of the individual's mental processes associated with the decision to take action in the face of compelling evidence. Therefore, the organizational, political, social, cultural and economic contexts within which a leader makes a decision (*Norton and Hunges, 2009:71*) will not be considered. In addition, the group dynamics, such as influence from the board of directors or the employees, which also affect a leader's decision to change (*i.e. McNeese, Reddy & Friedenberg, 2014*), have been explicitly excluded. It is acknowledged that these issues may play an important role on the instigation of a change process and suggestions on how future research could incorporate them in the analysis is offered at section 11.7.1.

1.5 Developing the research questions: Fallacies in the current paradigm

1.5.1 The essential yet insufficient compelling needs

According to Kotter (*2008:10*) urgency is a state where individuals not only are aware of opportunities and hazards but also desire to produce change by behaving in a fast and focused way. Yet, *Clark (2010:94)* argues that it is common to see organizations reacting with complacency even if they face extinction. In fact, *Donahue & O'Leary (2012)* investigated NASA's accidents and identified reasons that could cause organizational passivity, even after dramatic shocks are faced. Their work identified reasons that led to "compromised" responses by looking the change process as a whole and focusing mainly on cultural and structural characteristics of the company (*see also Eaton, 2010; Lucey, 2008*). One of the aspects that they mention and discuss is managers' unwillingness to listen to the various concerns that engineers were raising. From a broader perspective, given the top-down approach of planned changes (*Mehta, 2009:66*) this reluctance becomes a crucial issue that calls for further investigation. This is because, even when a compelling need is obvious for company's employees or for external advocates, dismissive leaders can still see no reason to change and, therefore, adhere to the existing paradigm (*Hoag, Ritschard & Cooper, 2002*).

In that context, *Dunn (2009)* wonders how could cognitive barriers that hinder senior managers' adoption of innovative solutions be overcome? His model for implementing lean in manufacturing has been rejected by the European Board of an international company, despite the deployment of need, urgency and a successful trial that demonstrated dramatic long term potential impact. *Hodgkinson & Wright (2002)* used

the method of scenario planning in a specific case with the aim of overcoming cognitive inertia, yet they were unable to persuade the CEO of the company and her team to change the current inadequate strategy and, thus, face the challenges of the future. *Kitsos (2011)*, experienced similar problems, when the board of a Greek SME refused to apply his knowledge management based model for enhancing competitiveness, despite the executives' acceptance of it as an excellent solution to their problems. What was interesting in his case is that the company was facing the country's severe economic crisis, which according to the urgency concept should have enabled change. Similar cases in which senior managers led their company into losing its competitive advantage by neglecting the warnings of a crisis from employees in lower levels, have been discussed in the literature (*i.e. McGrath, 2013*).

Urgency is indeed a diachronic and essential requirement for a change to occur (*Appelbaum, Habashy, Malo & Shafiq, 2012; Guzman, et al. 2011; Quinn, et al. 2012*). However, it seems that the PC models' main assertion that initially a need is identified and then a sense of urgency is created suffers from bias which probably is attributed to their anecdotal support (*Whelan-Berry, Gordon & Hinings, 2003*). *Kotter's (2012a)* claim that urgency starts at the top indicates that these models have focused on how to apply change by taking for granted the existence of an all knowing and committed leadership. But they fail to take into consideration cases where companies are operating at the edge of catastrophe and no one initiates change, until sometimes the inevitable happens. Similarly, most of *Kotter's (2008:61)* tactics are not always available when urgency starts from outside or in a lower level. For instance, a change advocate can neither distract in other activities nor "get-rid of" an executive member of the board. In other words, they can be essential tools for facilitating leaders to galvanize significant change in organizations (*but see Kelman, 2005*), but they do not address how to get the senior management team to recognize the need for change and commit to action (*i.e. Hodgkinson & Wright, 2002*).

Take for example the case of Heineken. Its CEO Freddy Heineken managed to transform company's distribution system despite any resistance that he faced from other top and middle managers. Yet, some years later when change was again necessary the very same CEO did not instigate the necessary changes, despite the fact that the compelling evidence was clear (*Beugelsdijk, Slangen & van Herpen, 2002*). Ultimately, the current thesis argues that something additional to the essential but insufficient

compelling needs is necessary for overcoming this top-level denial to change (Buchanan & Denyer, 2013), which according to this work lies behind two fallacies of the current approach and is conceptualized in the following fundamental question:

Research Question: What barriers inhibit senior management to accept the need for change and commit to action when urgency has been established?

1.5.2 Fallacy 1: Ability to see the need for change

According to the model the first step for an individual is to move from the precontemplation stage, where he/she is unaware or ignores the problem, to the contemplation stage, where he/she becomes aware and thinks of tackling it. The major issue at this first stage is that people cannot see the problem (Prochaska, DiClemente & Norcross, 1992). Respectively, in PCs the question could be why executives seem to suffer from “need-blindness”? Harper (2011:198) and Ben-Eli (2008) attribute this phenomenon to individuals’ mental models, which are established representations, frameworks and patterns about how the world operates and how the individual should act within it (see Mohammadi, Saberi & Baniroostam, 2015 for a review on definitions). In addition, Harper (2011:198) supports his argument with examples of executives’ irrational argumentations and decisions in the face of clear evidence. Senge (2006:8) shares this view and claims that mental models are a major reason why insights into innovative management practices are not applied. These studies clearly suggest that mental models play an important role when it comes to realize or reject the need for change.

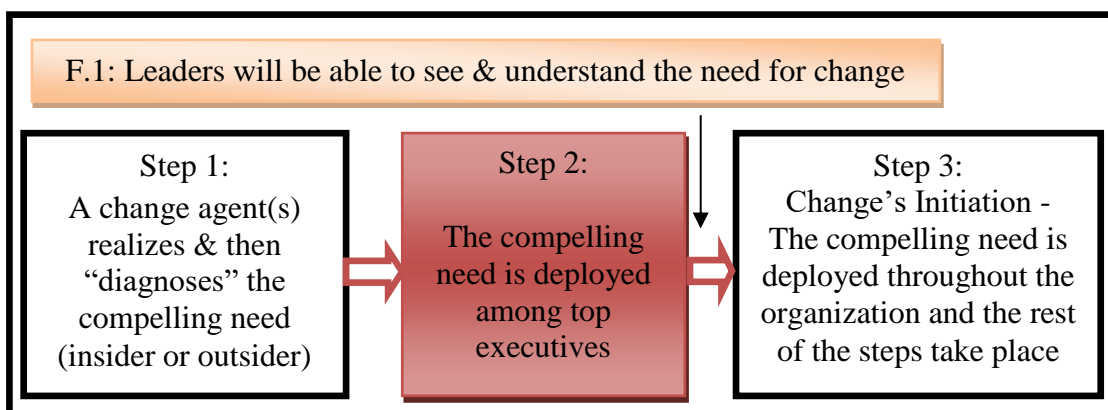


Figure 3. Fallacy 1: Ability to see & understand the need for change

Recent research indicates the fundamental importance of mental models to leaders’ effectiveness (Johnson, 2008). Given that leaders’ mental models control their

responses to change events (*Daft, 2008:133, Mumford, Friedrich, Caughron & Byrne 2007*) as well as play a determinant role in an organization's strategic renewal (*Barr, Stimpert & Huff, 1992*), reflections on and challenge of current assumptions should be an inherent skill when operating in a continually changing environment. Yet, this necessary quality is not generally possessed by traditional leaders (*Senge, 1998*), a fact which leads to the first fallacy (*fig.3*). In particular, leadership research assumes that every manager is a leader and that leaders are heroes (*Hunter, Bedell-Avers & Mumford, 2007*). Similarly, PC models assume that CEOs will act as leaders by initiating change in the light of a compelling need. However, the impact of compelling needs at this stage is not a determinant change factor, since mental models seem to be prone to stability even when dramatic down-turns in the market occur (*Hodgkinson, 1997*). As, *Weinstein, Sandman & Blalock (2008:126)*, stated, awareness of a hazard will not have the same effects on individuals' behaviour, since people who have established opinions about a hazard are more reluctant to change than the ones who haven't. In that sense, for every case the individual lies on a point in a spectrum, where on the one end compelling needs could "penetrate" their mental models while on the other it is like "hitting on a steely wall".

In essence, people with the same information, indicating the compelling need, will respond differently. This is the reason why *Cummings & Worley (2008:29)* claimed, in their PC model, that change initiatives do not proceed after the initial analysis of the problem due to disagreements about the need for change. While this detail seems to be ignored, or not explicitly expressed, by the rest of the models, it is generally accepted that breakdowns in PCs could be caused when change participants miss the need for change (*Van de Ven & Sun, 2011*). Definitely, awareness and acceptance of a need is an essential factor for developing commitment to change (*Jaros, 2010*), but *Pasmore's (2011)* work ascribes an additional perspective to the issue. He suggests that leaders could fail to realize a crisis or a problem, even if a burning platform is there. Therefore, it is not about lacking commitment to change due to lack of awareness but that the need for change is not understood and consequently the necessary awareness is not possessed in first place. On this basis, the following research question needs to be addressed:

“Sub-question 1: Why, even in the light of clear evidence, may it be so difficult for senior management to accept the need for change?”

1.5.3 Fallacy 2: Desire to go for change

If the first fallacy is overcome, the individual will be in the contemplation stage which means he will both understand the need and think about changing. However, awareness of the need doesn't mean deciding to change, since the individual at this stage is not yet committed to action (*Prochaska, DiClemente & Norcross, 1992*). Indeed, awareness of a compelling need, even if it is developed by a crisis or dramatic data, doesn't automatically lead to desire for change. For instance, aware individuals continue smoking, even if lung cancer has the highest rate of deaths (*Jemal, et al. 2011*) or they refuse to change their diet after a bypass surgery (*Edward Miller, as cited in Clark, 2010:94*). In addition, the vast majority of organizations with powerful financial ability and governments able to establish different policies remain passive and indifferent in the face of major issues like environmental pollution, inequality, injustice and wars (*Green & Allen, 2008*). Although there could be factors preventing change in the previous examples, which may or may not apply when it comes to business transformation, *Clark (2010:94)* argues that similarly it is common to see organizations reacting with complacency even if they face extinction.

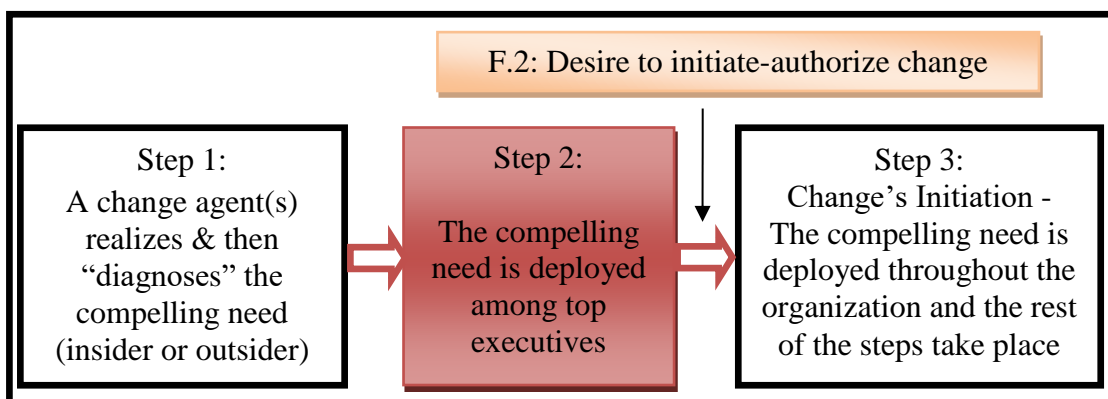


Figure 4. Fallacy 2: Desire to initiate-authorize

The missing link is provided by ADKAR (*Hiatt, 2006:43*), an individual based model able to guide OC initiatives, according to which awareness should also be accompanied by a desire for change. Whereas the concept of desire to change has been mentioned in the PC models, it seems that it refers to the lower levels of an organization. For instance, *Hayes (2007:82)* stated that before anything else takes place in a change program, leaders have to translate the need to desire for change. The main premise is that because employees will resist change, acceptance and agreement in first place is essential (*Mento, Jones & Dirndorfer, 2002*). Yet, the question, which also leads to the second fallacy (*fig.4*), is why resistance should refer only to employees? Indeed, the concept

of resistance has been widely critiqued in the literature (*By, et al. 2016; Hughes, 2016*). For example, *Dent & Goldberg (1999)* suggested that researchers and managers, under the social fights between labour and management in the 50s, have mistakenly established the notion of resistance from employees as a received truth. Similarly, *Krantz (1999)* argued that resistance has been utilized as an excuse for management and helped to transfer accountability for failures to lower levels.

It can be argued, therefore, that resistance is not something that lies merely at lower hierarchical levels. Instead, it can be considered as a fight between continuity and interruption embedded in the human-social reality (*Adair, 2007:112*) that can cause commitment problems even at the most senior level of the organization too (*Kegan & Lahey, 2001*). From this perspective, OC theory assumes that leaders jump from contemplation to preparation stage, which implies that commitment to change on their behalf is granted (*fig.2*). Similarly, it seems that PC models (*refer above*) implicitly assert that the compelling reasons are enough to set leadership in favour of change. However, as *Lippit, Watson & Westley's (1958:131)* stated “*problem awareness is not automatically translated into a desire for change*”, a detail which has not been taken into consideration by the rest of the PC models. On the contrary, OC literature has been based on the assumption, or as *Griffith (2001)* characterizes it, dangerous myth, that change starts automatically after the realization of the need. This assumption is logical, given that leaders have been treated as “*resistance-proof*”, but in reality it seems that it is difficult for leaders to develop strategic beliefs inconsistent with the current business practices, even when the need for change has been identified (*i.e. Polaroid case see Tripsas & Gavetti, 2000; Wack, 1985*). On this basis, the following research question needs to be addressed:

“Sub-question 2: Why is it so difficult for senior management to commit to change when the compelling need has been established and accepted?”

1.6 Setting the research objectives: A cognitive-emotional approach

1.6.1 An interdisciplinary research approach

Following the research question and the fallacies that have been identified above, this work sets out to develop a new theoretical understanding that will explain why some business leaders avoid taking action when evidence indicates an urgent need for change. The complexity of this research problem makes clear that any potential solution is going to lie

beyond the borders of the change management field. In such cases, the interdisciplinary research becomes a useful methodology, since it brings closer ideas that lie in distinct and isolated disciplines and fields of study (*Rhoten & Parker, 2004*). As a result, the first step of the current work is to design the methodological approach according to which the researcher can conduct the interdisciplinary research and, thereby, construct a genuinely new theoretical framework. This leads to the first objective of this work, which is to:

“Objective 1: Design a strategic research approach for developing a new interdisciplinary theoretical understanding of a problem.”

1.6.2 The call for a schema change process

The world is full of information which individuals analyse and, according to their understanding, decide how they should respond (*Lehto, 2006:66*). Similarly, compelling needs are realized through information, which leaders analyse and decide whether or not they will authorize action (*Liu & Perrewé, 2005*). In particular, when a change advocate introduces the need for a new initiative, leaders in the company are expected to have their existing schemas, and, consequently, their mental models, challenged which will lead to a sense-making process (*Weber & Manning, 2001*). The result of such a challenge, therefore, needs to be a revised mental model and, thus, a new understanding of the case at hand which will, ultimately, lead to the initiation of different actions and responses on leader's behalf (*Cameron & Green 2004:21*).

Cognitive psychologists suggest that the construction of mental models is guided by minds' abstract cognitive structures, called schemas (*Lipshitz & Shaul, 1997:293; refer also to sec. 3.1*), based on which individuals interpret information (*Ikiuga, 2007:63*) and "store" their knowledge about the world (*Michon, 1986:55*). Apparently, then, the preliminary aim of this work is to research within the general scope of schematic information processing, the process according to which leaders analyse information and revise their mental models in order to reflect the needs indicated by the received evidence. Thereby, an understanding of the cognitive approach to the schema change process, which can then be used to develop a sophisticated model to address the problem under investigation, will be formulated. This leads to the second objective of this work, which is to:

“Objective 2: Research within the general scope of schematic information processing how schemas change and construct a revised mental model.”

1.6.3 The need for a cognitive-emotional approach to change

It is true that schema change has not been ignored by organizational researchers. Nevertheless, despite schema theory's initial focus on the individual, organizational researchers have allocated their interest and efforts towards the analysis of shared schemas (*Labianca, Gray & Brass, 2000*). Consequently, the analysis from this higher collective level led to a disregard of the cognitive and emotional demands, which are necessary at an individual level for a schema change to occur (*Thompson & Ryan, 2011*). This is a significant omission, given that the challenge that leaders experience because of the compelling evidence, places them in an emotionally unstable state, in which they try to make sense of the new by modifying and adapting their pre-existing schemas and mental models (*Bartunek, et al. 2011*).

A significant exception is the work of *George & Jones (2001)*, who driven by this gap in the literature developed a model that not only focuses on individual schemas but also considers cognitive and affective factors during the change process. However, while their model, accompanied by the more abstract TTM (*sec. 1.5.2*), constitute the basis of this work, the mediating and static role that they ascribed to emotion (*Tobey & Manning, 2009*), makes their approach inadequate for the needs of the current research and calls for radical improvements. For that reason, it is essential to understand the principles that underpin the schema change process as well as the logic of resistance, exclusively at individual level and on a dynamic cognitive-emotional basis. This leads to the third objective of this work, which is to:

“Objective 3: Establish the basic cognitive – emotional principles that underpin the schema change process at individual level.”

1.6.4 Schemas & resistance to change

Schemas do not accept passively the need for change when they face evidence discrepant to their existing beliefs (*sec. 3.2*), but, due to their inherent resistance qualities (*Arzenšek, 2011; Larson, 1994*), could halt the change process. Characteristically, *Pasmore (2011)* gives examples where evidence, both qualitative and quantitative in nature, could be misunderstood due to alternative explanations-excuses that both cause need-blindness and constitute compelling evidence insufficient. According to *Boin & Hart (2003)*, there are psychological factors responsible for leaders' refusal to face their personal as well as organizational deficiencies, which,

however, have been largely ignored by the superficial analyses that the scientific concept of “resistance to change” adopts (*Tannenbaum & Hanna, 1985:99; Thompson & Ryan, 2011; but see George & Jones, 2001*). It is necessary, therefore, to design the mental process according to which compelling evidence is perceived and accepted, as well as to determine the respective barriers that could prevent leaders from identifying the need for change. This leads to the forth objective of this work, which is to:

“Objective 4: Determine the barriers that prevent leaders from perceiving and accepting the need for change.”

Someone could argue that when the compelling evidence for change is identified and accepted it is obvious that change is the only way. Definitely, awareness and acceptance of a need is an essential factor for developing commitment to change (*Jaros, 2010*), yet, schema-change may not occur even if the need is identified (*George and Jones, 2001*). As *Weinstein, Snadman & Blalock (2008:130)* claimed, in the face of a potential mind-set change, individuals could get stuck and quit trying, before they even start changing. Within the business context, in particular, this could happen because in order to change their mental model, leaders will need to accept that something is wrong with the current status. Admitting difficulties with the current organizational condition could require an “ego-challenge”, which might be hard especially when it is admitted to an outsider (*Hayes & Prakasam, 1991*) or to employees that come from lower levels of the hierarchy (*Crosby, 1993*). In this sense, a proposed organizational change is equated with a small “internal death” of leaders’ “ego” (*Zell, 2003*), which could make them act egoistically to protect their image and the current status quo by opposing change (*Levay, 2010*). It is essential, therefore, to design the mental process according to which commitment to change is developed as well as to determine the respective barriers that could prevent leaders from undertaking the necessary action. This leads to the fifth objective of this work. That is, to:

“Objective 5: Determine the barriers that prevent leaders from committing to action.”

1.6.5 Testing the theoretical model

Given that it is the application of a theory that may cause its revision (*Deming, 1994:103*), the theoretical recommendations will have to be verified. For that reason, a research design based on the methodological paradigm of formative evaluation will be adopted

(q.v. ch.9). The main aim will be to assess the functionality and logic of the proposed model (*Patton, 1988*), as well as identify areas for improvement during the initial stages of its design and development (*Beyer, 1995*). Therefore, the last objective is to:

“Objective 6: Verify the theoretical recommendations and revise them based on the analysis of the feedback”

1.7 Introduction to the rest of this work

In order to address the research problem, the work will commence with a research methodology chapter, in which the logic that guided the development of the theoretical model will be explained (*objective 1*). The chapter will initially present the philosophical assumptions of the researcher and will discuss the nature of the current investigation. Then, a strategic methodological approach for conducting interdisciplinary research that aims to construct a new theoretical framework will be developed.

Afterwards, an introductory chapter in which the link between schemas, mental models and subjectivity will be presented as well as the subsequent assumptions regarding the schema change process will be discussed. On this basis, a suitable model of schematic interpretation of information at the individual level will be identified and the necessary modifications so that it can reflect a change process will be analysed (*objective 2*). The core of these modifications is the re-conceptualization of the model based on the fact that the nature of the incoming message is discrepant, instead of neutral, an alteration which raises important implications regarding the concept of resistance to change.

In chapter 4, the appeal for a cognitive-emotional approach for studying the schema change process and the logic of resistance will be addressed (*objective 3*). More precisely, a suitable theory of emotions for accompanying the cognitive approach to schema change will be introduced. Then, the motivational implications from the impact of the emotions on the process and the respective action tendencies will be discussed. Finally, the defensive scenario, which refers to the development of action tendencies that drive the leader to undertake insufficient action to change, will be further elaborated.

The following four chapters will conceptualize the schema change process by modifying accordingly the already selected model. This will be accompanied by the

identification and analysis of the barriers that inhibit leaders from understanding the need for change (*objective 4*) as well as committing to action (*objective 5*). In particular, chapter 5 will discuss the process that leaders follow in order to perceive the information that indicates the need for change. While, realization starts at an automatic and unconscious level, acceptance of the need and commitment to action take place at a higher level of consciousness. The process in the higher level will be discussed in chapter 6 and it will be mapped in chapters 7 & 8. By mapping the process, a basic guiding framework will be provided, which is expected to enable the change advocate to adopt specific actions for overcoming leaders' denial.

The work will, then, proceed to the development (*chapter 9*) and application (*chapter 10*) of the formative evaluation research and the presentation as well analysis of its results. The next step of this work is to discuss the research implications that have emerged as a result of the development of the interdisciplinary theoretical understanding. In addition, limitations of the approach that has been followed as well as recommendations for future research will be provided (*chapter 11*). Finally, a concluding chapter will summarize and present the most important points of the work (*chapter 12*).

2 A methodological design for constructing a new theory

The aim of this chapter is to elaborate the research approach that was followed within the scope of this work. That is, to explicitly demonstrate both logic and specific methods that were used in order to develop the proposed theoretical model. To start with, the chapter will present the philosophical assumptions of the researcher and will discuss the nature of the current investigation. Existing methodologies and approaches, found in the literature will be synthesized with the aim of building an integrated research design that could meet the requirements of the current work as well as guarantee robust scientific results. Specifically, this design puts forward a strategic approach, with a specific step-based process to follow, for conducting solo interdisciplinary research.

2.1 Developing a new interdisciplinary theory

2.1.1 The philosophy & fundamentals of the methodological design

Any research can be perceived as a process that starts from the conceptualization of a problem and gradually builds understanding with the aim of providing an answer-solution to it (*Morse, 2003:189*). It stands to reason that there is no such thing as a single best way to conduct research, since the suitability of the methodological approach to be followed depends on various factors (*i.e. Sogunro, 2002; Tuli, 2011*). With this absence of an “one size fits all” solution in mind, the researcher has to take plenty of decisions throughout the process, which, needs to be made under a set of unique rules that ensure consistency of scientific logic (*Remenyi & Williams, 1995*) so that sound research with robust results can be produced (*Jonker & Pennink, 2009:22*). On this basis, *figure 5* illustrates, in a pyramidal form, the questions, and their answers, that drove the methodological design of this work.

To start with, it is essential to discuss the philosophical paradigm by which the researcher abides, so that the reader can have an understanding of its influence on the research process (*Morgan, 1979*). The researcher shares the phenomenological assumptions of constructivism, which, generally speaking, advocates that (social) reality is inter-subjectively constructed through a dynamic process of continuous interactive deliberation (*Guba & Lincoln, 1994; Morgan & Smircich, 1980; see also*

interpretivism in Cohen, Manion & Morrison, 2011:10; and Jayanti's, 2011 analysis on constructivism & postpositivism). As a result, it is assumed that universals and absolute truths do not exist (*ontological paradigm*), as reality is a particular that is defined, and thus perceived as such, by how individuals think and act in a specific point in time and space (*nominalism: Gonzalo, 2015*). On this basis, constructivism and the concept of subjectivity influenced not only the logic according to which theoretical and practical data were analysed and interpreted, but also the entire philosophical underpinnings of the work. Characteristically, as it will be made clear throughout the work, the whole argument on why leaders do not perceive as well as commit to change was based on the idea of an ego-driven reality that is subjectively constructed based on the emotional experience of the individual.

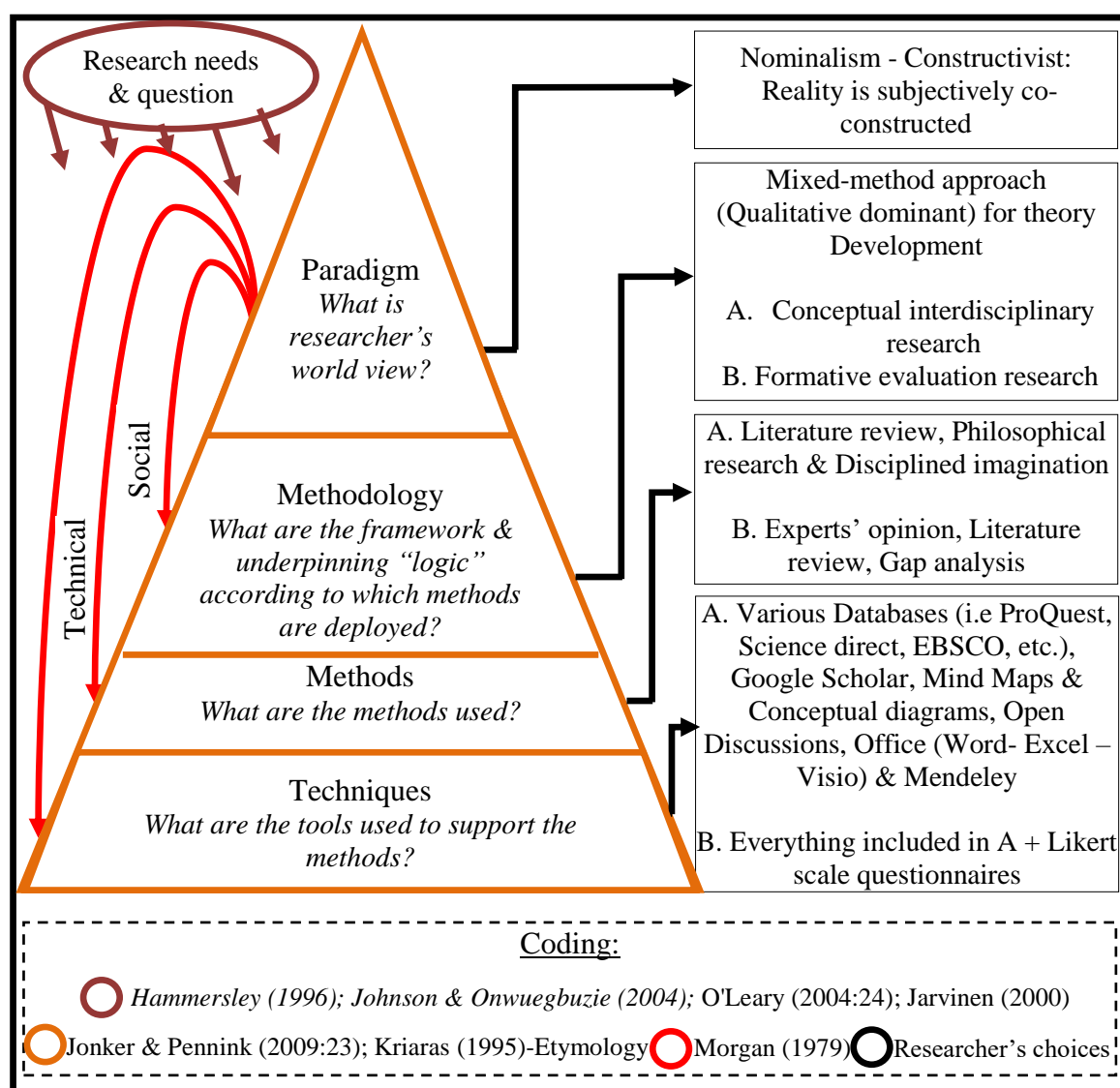


Figure 5. The methodological design & the main questions

At the same time, it is important to take into consideration that, while the paradigm is essential for every aspect of the research (*i.e. Guba & Lincoln, 1994*), flexibility regarding the design and application of a research (*methodological question-assumptions*) should be sought (*Brannen, 2005*). More precisely, when it comes to develop a methodological design it is also essential to consider the research question and the general requirements imposed by the work itself (*i.e. Sogunro, 2002; Tuli, 2011; Jarvinen, 2000; O'Leary, 2004:24*). This enables researchers to capture the potential of mixed method approaches, like the one followed in this work.

Within the scope of this research, therefore, a highly qualitative dominant mixed method approach was followed. This allowed, under general qualitatively oriented thinking, which is advocated by constructivism (*Johnson & Onwuegbuzie, 2004*), quantitative characteristics (*e.g. the use of propositions for verification/falsification: Guba & Lincoln, 1994*) to influence the underpinning logic (*Johnson, Onwuegbuzie & Turner, 2007*). The mixed method facilitated the development of a flexible research design, which on the one hand was, to the extent that this is possible, free of restrictions imposed by the researcher's predetermined philosophical assumptions (*Hammersley, 1996*), and on the other hand ensured robust solutions to the research questions (*Johnson & Onwuegbuzie, 2004*). The following section provides a general introduction to the methodological design.

2.1.2 Introducing the process & the appropriate methodologies

During the very first steps of this research, the need for a mixed method approach that would enable the development and testing of a new theory was apparent (*Creswell, 2009:49*). A review of the methodologies for building theories (*cf. Torraco, 2004*) indicated that none of them could entirely capture the special conditions that characterize this research. Consequently, the need for a new customized approach emerged. For that reason, *Lynham's (2002)* generic method for applied theory-building research (*black boxes fig.6*) was linked (*black discontinuous arrows fig.6*) with *Bourner's (2002)* four basic steps of any research journey, in order to create a general guiding process (*claret boxes fig.6*) according to which specific methods can be logically deployed (*claret discontinuous arrows fig.6*). It should be noted that any choice for developing the methodological design was taken under the general logic that there are no right or wrong research methodologies but only more or less useful ones (*Silverman, 2011:53*).

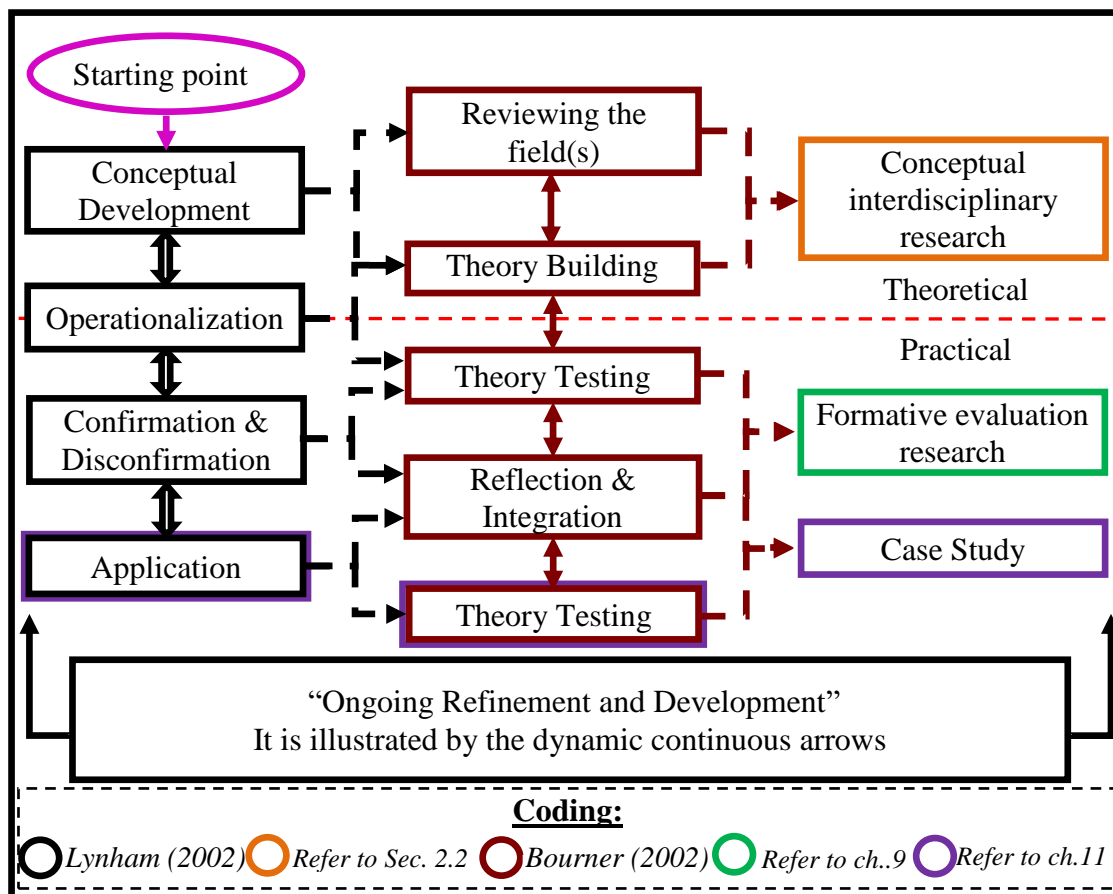


Figure 6. A process for building & testing interdisciplinary theories

The first phase refers to the conceptualization of the theoretical understanding, which includes the review of the relevant literature as well as the development of an initial theory (Bourner, 2002; Lynham, 2002). When the research problem was analysed it was clear that any potential solution was going to lie beyond the borders of the change management field. In these cases, interdisciplinary researches become useful methods, since they bring closer ideas that lie in distinct and isolated disciplines and fields of study (Rhoten & Parker, 2004). The researcher, therefore, utilized Repko's (2006) step-based model, which is a synthesis of previous approaches to interdisciplinary research, in order to interpret and (meta)-synthesize already generated theoretical insights and interrelations (Walsh & Downe, 2005) from various disciplines and, thereby, produce an interdisciplinary understanding of the problem and its potential solution (Aboelela, et al. 2007). Essentially, the ultimate aim was to develop relations among the different disciplinary constructs and generate a new conceptual theory that is logical and internally consistent (Wacker, 1998).

The *operationalization phase* is the stage of the theorization process that links theory and practice (Lynham, 2002). On the one hand, it refers to the conceptualization of the accumulated theoretical understanding in a model-framework that is accompanied by specific and testable propositions (Lynham, 2002). Of course, the produced model is not a static outcome of a separate stage of theorization, but it reflects the dynamic and continuous modelling of the researched phenomenon (*feedback loops in fig.6*), which, essentially, is an inextricable aspect of the entire process of the interdisciplinary theory formulation (Schwaninger & Groesser, 2008). Through a set of questions (*see fig.8*) the researcher could reflect on the theory's internal consistency and, thus, validity and logic (Wacker, 1998). In addition, internal validity of a theoretical systematic review of existing knowledge is established based on the rigour and robustness of the approach that is followed (*i.e. Bigby & Williams, 2008*). The interdisciplinary research will be graphically illustrated and explicitly analysed, along with guidelines for reassuring validity, in the following sections.

At the same time, the operationalization phase includes the step of theory testing (Bourner, 2002), during which the final version of the model and the captured within it theoretical understanding are evaluated so that external validity can be established (Holton & Lowe, 2007). For the needs of testing the theory, a research design based on the methodological paradigm of "formative evaluation" that aimed to assess the logic of the proposed model (Patton, 1988), as well as identify areas for improvement before it is put into practice (Beyer, 1995), was adopted (*q.v. ch.9*). As a result, a formative evaluation research was designed and integrated with the interdisciplinary research so that a mixed dynamic design of a developmental type could be built (*Development design: Greene, Caracelli & Graham, 1989*). That is, the results of the interdisciplinary research guided the design of the formative evaluation one which in its turn revised the interdisciplinary framework and so on. This process will complete the confirmation and disconfirmation phase (Lynham, 2002), and is expected to deliver a robust theoretical model-framework that is ready for practical application and potential revision in future research (*q.v. ch.11*).

2.2 The logic behind the conceptual interdisciplinary research

Within the qualitative dominant paradigm (French, 2009) the inductive reasoning of philosophical research (*from specific experiences to established theories*) and the deductive one of literature review (*from established theories to specific experiences*)

were continually interacting in order to build a new theory (*Parkhe, 1993*). In addition to the complementary elements of empiricism and cerebral logic (*Schwaninger & Groesser, 2008*), theorizing, especially when it is based on knowledge that comes from distinct domains (*Holmström, Ketokivi & Hameri, 2009*), requires intuition (*Bourgeois, 1979*), which is part of an abductive approach that is distinct to the previous reasoning (*Anderson, 1986*). Abduction is the process of developing the best possible hypothesis that someone can think of, or imagine, for explaining a set of data at hand (*Josephson, 1996*). Therefore, the method of disciplined imagination was used, since it is suitable for involving the necessary intuition and creativity of abductive reasoning in the theorizing process (*i.e. Lee, Pries-Heje & Baskerville, 2011*). Overall, the described methodological approach underpinned the interdisciplinary process that is presented in the following table.

Theory building phases (<i>Lynham, 2002</i>)	General steps of research journeys (<i>Bourner, 2002</i>)	Steps of the Interdisciplinary Research (<i>Repko, 2006</i>)
Conceptual Development	Reviewing the field(s)	Define the problem or formulate the focus question
		Justify using an interdisciplinary approach
		Identify relevant disciplines and fields of study
	Reviewing the fields & Theory Building	Conduct a literature search
		Develop adequacy in each relevant discipline
		Analyse the problem and evaluate each insight into it
Conceptual development & Operationalization	Theory Building	Identify conflicts between insights and their sources
		Create or discover common ground
		Integrate insights
		Produce an interdisciplinary understanding

Table 4. The steps of the interdisciplinary research

To start with, the literature review led the entire process; that is from the establishment of the research question (*Forrester, 2012*) to the analysis and discussion of the scientific results (*Randolph, 2009*). As far as the theoretical part of this work is concerned, the review aimed at the creation of a preliminary framework that could be used as the basis for advancing knowledge regarding the problem (*Webster & Watson, 2002*). In order to achieve this aim, the need for an interdisciplinary understanding advanced an integrative type of literature review (*Khoo, Na & Jaidka, 2011*) that aimed to generate a new theoretical advancement. In particular, knowledge from various domains was extracted and critically analysed for its potential contribution to the problem, and then synthesized anew, in order to produce an integrative theoretical framework (*Torraco 2005*) that could hypothetically address the research problem under investigation (*critical reviews in Grant & Booth, 2009*). Consistent, therefore, with the paradigm of qualitative meta-synthesis (*Walsh & Downe, 2005*) the researcher reinterpreted the findings of the reviewed studies, through the lens of the current work's needs and questions, in order to develop a new theory (*Schreiber, Crooks & Stern 1997*) that will explain the phenomenon under investigation (*Zimmer, 2006*).

Philosophical (or analytic) research, which refers to a purely mental pursuit based on the researcher's internal logic (*Buckley, Buckley & Chiang, 1976:26*), was the second method used within the scope of this work. While as a method it is neglected, or not explicitly discussed in doctoral studies (*Schwartz & Walden, 2006*), its contribution to a research project can be essential under specific conditions (*i.e. Furuholt & Sein, 2012*). As far as this work is concerned, philosophical research was chosen due to three main reasons. Firstly, the huge amount of data from various disciplines and the need for reasoning causal interdisciplinary relationships required pure mental reflection on the literature review for establishing research hypotheses (*Jenkins, 1985*). Secondly, consistent with *Furuholt & Sein's (2012)* work, it was necessary to capture knowledge from previous experiences regarding the problem, since both the researcher (*Kitsos, 2011*) and supervisor have faced irrational resistance from CEOs in their careers. Therefore, philosophical research, accompanied by regular and profound discussions between the researcher and his supervisor, was considered to be an appropriate method, since it enabled reflection on already available data (*Buckley, Buckley & Chiang, 1976:41*). Lastly, philosophical conceptualization is a type of theory building that introduces the qualities of in-depth and logical constructive thinking (*Meredith, 1993*).

Such qualities are essential elements of any research that follows a theoretical approach to new theory development (Remenyi, Williams & Money, 1998:47).

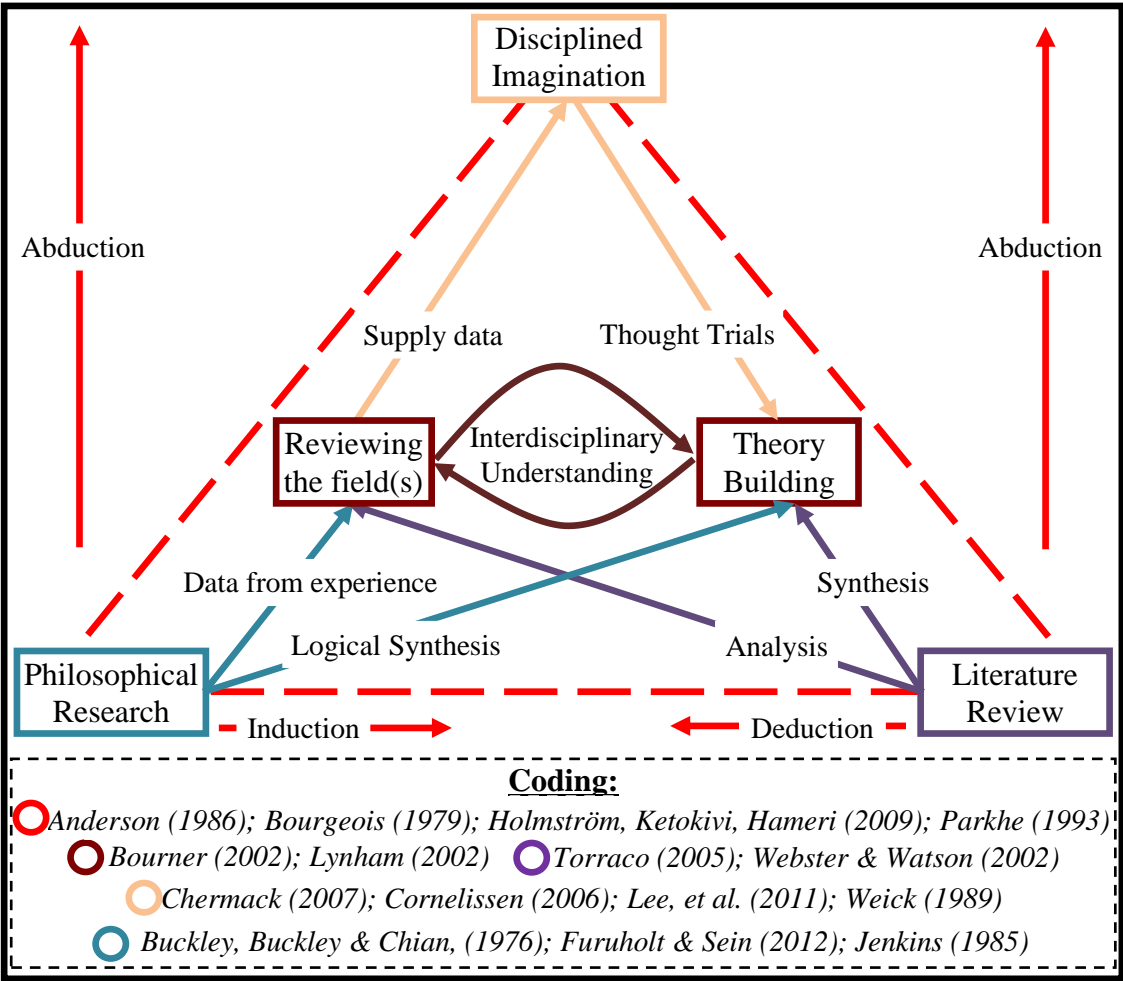


Figure 7. Mix methods for the interdisciplinary research

Finally, in order to bridge examined literature, already established assumptions from previous experiences and intuition, the method of disciplined imagination was utilized as the binding glue of the theoretical approach (Cornelissen, 2006). Essentially, the researcher, based on the available data as well as his intuition, was conducting sequential “thought trials” with the aim of building the interdisciplinary understanding (Weick, 1989). These trials were evaluated according to specific criteria (Weick, 1989), which are reflected in the set of questions that have been added to Repko’s (2006) model (fig.8: yellow rhombi). In this way, the dynamic nature of interdisciplinary researches was captured and, thereby, an advanced theoretical scenario (Chermack, 2007) of what the change process might be was able to be produced. Note, though that the scenario entailed uncertainty as it derived from abductive reasoning (Peirce, 1974: V.171), and thus, awaited for external validation through additional research.

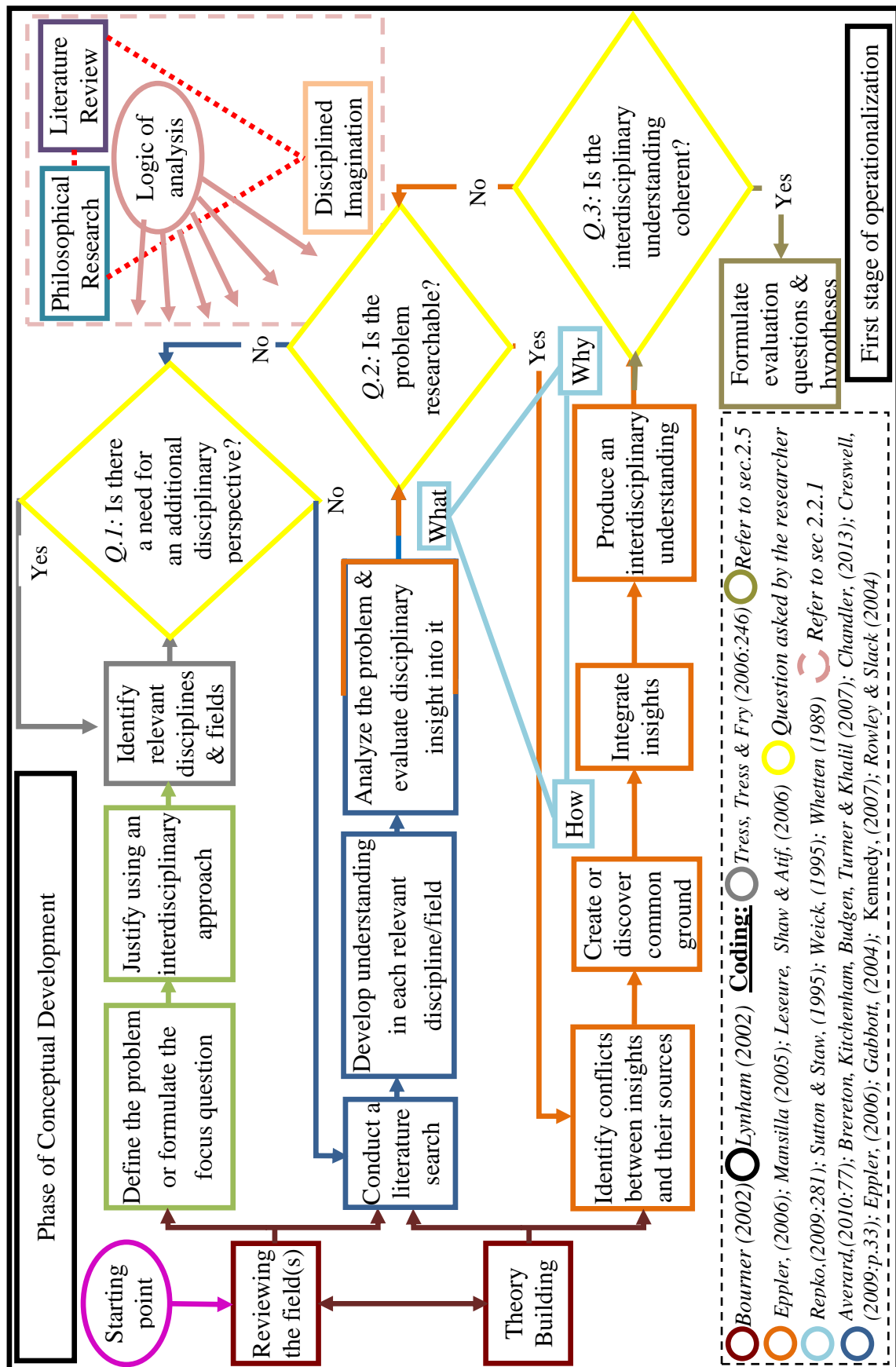


Figure 8. The process of interdisciplinary research

2.3 The dynamic process of the interdisciplinary research

The steps of the interdisciplinary research (*table 4*), which constitute the phases of conceptual development and the first stage of operationalization (*fig.6*), are illustrated in *fig.8*. The whole approach was driven by the methods described above (*fig.8: pink box left-top corner*) and ended in the development of an interdisciplinary understanding that was ready to be conceptualized in a testable framework (*operationalization phase*). As it can be seen from figure 8, the process of conducting interdisciplinary research can be divided into three main stages, which will be analysed in the following sections.

2.3.1 Stage 1: Identify relevant (Sub)disciplines and fields of study

The first two steps, that is the formulation of the research problem (*q.v. ch.1*) as well as the reason for choosing an interdisciplinary approach (*sec. 2.2*), have already been discussed. As far as the identification of the relevant disciplines and study fields is concerned the challenge was to identify those that could potentially contribute to the solution of the problem (*Repko, 2009:160*). *Table 5* presents them, as well as their specific branches or subdisciplines, which have been used within the scope of this work. It should be noted that the focus of analysis will be on the sub-disciplines, since these days they can constitute independent fields of knowledge (*Repko, 2009:5*).

Disciplines & fields	Sub-Disciplines & brances
Business & Management	Leadership/ Management
	Change Management (Organizational & individual)
	Theoretical approaches on crisis resolution
Psychology	Cognitive Psychology
	Psychology of emotion (Appraisal theory, Core affect & emotion regulation)
	Dual-Processing
	Depth psychology (Psychodynamics)
	Motivation
Philosophy	Various Philosophical Schools (i.e. Platonism, Sophism)
	Epistemological & Ontological theories
	Consciousness & mind

Table 5. List of relevant disciplines & fields (*Academic Disciplines 2013; Repko, 2009*)

While the initial sub-disciplines & fields of study (*red-coloured*) were determined based on the research question and experience with the problem itself (*Tress, Tress & Fry, 2006:246*), the need for additional disciplinary perspectives emerged in later

phases of the work (*Q.1 in fig.8*). They complemented the previous ones and facilitated the development of a coherent interdisciplinary understanding. The logic according to which the sub-disciplines and fields were chosen as well as their contribution to the development of this work's theoretical model, are presented in detail at *appendix 5.1*.

2.3.2 Stage 2: Working on single-disciplinary level

Once the disciplines and fields were chosen, the researcher had to work with the literature of each single discipline and field in order to retrieve relevant information, understand it, and, ultimately, discuss its contribution to the problem at hand. The following sections aim to explicitly present the steps that the researcher followed in the single-disciplinary level.

Conduct a literature search

The first step was to reach and retrieve literature relevant to the work (*Gabbott, 2004*). For that reason, with the research question in mind, initial keywords have been listed. This list was afterwards expanded, due to the dynamic nature of the work (*Continuous circles fig.8*) and the consequent need for additional searches in the literature (*Averard, 2010:77*). A list with the main key words that were used within the scope of this work is provided at *appendix 5.2*. The key words did produce a considerable amount of sources. Therefore, the main challenge at this stage was to develop a method that would enable an initial filtering of the literature to take place. In the current study a filtering strategy was designed and deployed in reference to two factors; quality and relevance. The following table illustrates the process.

Type of sources - Prioritized (<i>Creswell, 2009:33</i>)	Specific criteria for judging source's quality (<i>Rowley & Slack, 2004</i>)	Skimming approaches for ensuring relevance (<i>Brereton, et al., 2007</i>)
WEB sources and general online overviews	<p>In which audience does the page refer to?</p> <p>To whom the page belongs?</p> <p>* Knowledge from these sources wasn't used a lot in this work. The only reason for reviewing that type of sources was to get the basic "feeling"</p>	<p>1. Scanning the web page.</p> <p>2. Use of search options.</p> <p>* If the page was big enough it was exported into pdf form and keywords were utilized.</p>

<i>Journal articles</i>		<p>Is the paper academic-oriented?</p> <p>Is there a list of references to support the evidence?</p> <p>Is the Journal reputable?</p>	<ol style="list-style-type: none"> 1. Initial reading of the abstract. 2. Scanning of introduction & reading of discussion/conclusion. 3. Skimming of the main part. 4. Read headings & study diagrams & illustrations
<i>Books</i>	Edited	Same rules with Journal articles were applied.	
	Classic	<p>Is there a list of references to support the evidence?</p> <p>Is it well presented and clearly structured?</p> <p>Is it written by authoritative author?</p>	<ol style="list-style-type: none"> 1. Read table of contents 2. Use of the index or search options (E-book). 3. Focus on interesting sections - Read first and last paragraph. 4. Read heading & study diagrams & illustrations.
<i>Conference papers & Thesis</i>		<p>Is the conference paper part of a book?</p> <p>Are there any other published papers from the author(s) on the subject?</p> <p>*Conference papers and thesis have slightly been used in this work.</p>	Similar to Journals

Table 6. Ensuring source's level of quality & relevance

It should be clarified that a study didn't have to meet all of these criteria. For instance, if a book had a small amount of references, but is written by an authoritative author or has a clear structure, it was possible to be considered as a good study to read. This is because, the aim at this stage was to evaluate the quality of the source, not the source's context, a process which was taking place in the following step.

Develop understanding in each relevant discipline & field

Once the studies were chosen the researcher had to go through the process of critical analysis, in which he critically evaluated previous research in order to develop understanding (Chandler, 2013). For interdisciplinarians, analysis should end in a general “feeling” for the overall disciplinary perspective and a deep understanding of the specific theories in use (Newell, 2001; Szostak, 2002). The challenge, therefore, was to develop a set of rules-criteria according to which the researcher could judge which studies and theories to include or exclude (Kennedy, 2007), so that a sound understanding could be developed. To start with, the acceptance of a study was based on the criteria listed on the following table.

Criterion	Questions
Provenance	What is the author’s credibility? Are the arguments of the study based on evidence (i.e. reference list or empirical evidence) or are they the outcome of author’s own experience?
Objectivity	Is there an equal consideration of opposing evidence or does the paper present a one-sided view? Did the researcher(s) follow a robust research approach?
Persuasiveness	Are the author's arguments and conclusions convincing? Which of them are most/least convincing? How did the author come to such conclusions?
Value	Does the work contribute to the understanding of the problem or issue under investigation? Does the work contribute to the advancement of knowledge in the field in general?

Table 7. Criteria for evaluating a study (Based on University of California, 2013)

While the previous criteria were used to evaluate any type of study that has been retrieved from the literature, in this work specific theories have been utilized as the core basis for developing the theoretical interdisciplinary understanding of the problem under investigation (i.e. Axelrod’s, 1973 theory of cognition; Scherer’s, 2001 & Lazarus’s, 1991 appraisal theories of emotion, etc.). As a result, it was necessary to use specific criteria in order to evaluate such theories in more depth and, thereby, decide whether they should be included in or excluded from the work. The following table presents the criteria that have been used for that reason.

Criterion	Questions
Reliability	Is the theory reliable? Can it be trusted? Has the theory been tested empirically? Has the theory been recommended by other authors?
Convenience	Is there available knowledge regarding the theory? Does the theory contribute to the understanding of the problem? What are the implications?
Established Status	Has the theory been used in the field? If yes, to what extent? How many times has it been cited?*

*For that reason the citation index in Google scholar was used.

Table 8. Criteria for assessing theories (Based on Stahl & colleagues 2008)

The use of the criteria presented above ensured the high quality of the studies that have been included in this work and, thus, established a strong basis upon which a robust interdisciplinary understanding could be built. You may wish to refer to appendix 5.3 as well.

Analyse the problem and evaluate disciplinary insight into it

The studies, after their analysis, were synthesized in order to construct the disciplinary insights to the problem (Repko, 2006; 2009:217). Mind maps were utilized for noting down and structuring into categories important arguments and ideas (Eppler, 2006; see also Cañas, Reiska, Åhlberg & Novak, 2008 for similar use of concept maps). The result of this step was a clear demonstration of the disciplinary concepts that constituted the essential element of “what” will be included in the overall theory (Whetten, 1989). An example can be found in appendix 5.4.

Criterion	Explanation
Competence	The literature review should describe, in great depth, the issue under investigation by critically discussing arguments and counter-arguments regarding a specific phenomenon.
Congruence	The literature should include sources that after discussion and synthesis can reach to a common conclusion and, thus, collectively construct a theoretical understanding.
Consistency	In the literature, conflicts between the sources that have been used need to be addressed to the extent that this is possible.
Stability	The fundamental structure of a comprehensive literature review should not be affected when new sources are discovered.

Table 9. Criteria for evaluating the literature review (Leseure, Shaw & Atif, 2006)

Finally, the contribution of the literature review up to this stage of the model had to be evaluated in reference to its sufficiency and comprehensiveness (*Leseure, Shaw & Atif, 2006*). The aim of such an evaluation was to answer whether the problem or the issue under investigation was researchable or not given the level of single-disciplinary understanding that has been achieved (*fig.8: Q.2*). The criteria that have been used for that reason are listed in table 9. Disciplinary insights that satisfied the previous criteria were considered as ready to be utilized to construct the interdisciplinary understanding. The following stages aim to describe this process.

2.3.3 Stage 3: Working on the interdisciplinary level

Once the disciplinary insights were captured, the researcher had to work at the various disciplinary crossroads. That is, the insights that had been captured at the single-disciplinary level, needed to be synthesized and integrated with the aim of creating an interdisciplinary understanding of the research problem. The following sections aim to explicitly present the steps that the researcher followed in the interdisciplinary level.

Identify conflicts & discover or create common ground

The first step in the interdisciplinary stage was to trace conflicts and then create common ground among the various disciplinary insights that have been captured during the previous phase (*Repko, 2009:247,271*). Common ground is developed based on five integrative techniques including expansion, redefinition, extension, organization and transformation (*not all of them used in every single case. refer to Repko, 2009:281*). Its result was to conceptualize the “how” element of a theory, which describes the causal relationships between the already identified “whats” of the developed understanding (*Whetten, 1989*). Appendix 5.5 demonstrates an example of this process.

Integrate insights & produce an interdisciplinary understanding of the problem

The “what” and “how” elements accompanied by various charts and diagrams are the essential, yet insufficient, parts of the theorizing process the ultimate aim of which is to produce a robust theory (*Weick, 1995*). This is because a complete theory must explain the logic that underlies the various causal relationships between the concepts (*Sutton & Staw, 1995; Whetten, 1989*). As a result, the next step was to creatively combine disciplinary insights (*Repko, 2009:296*) and make explicit “why” the specific concepts of “whats” and their integrations of “hows” were chosen. For that reason, the researcher utilized conceptual diagrams which facilitated the structuring of complex

interdisciplinary concepts by linking predefined disciplinary categories (*Eppler, 2006*). Appendix 5.6 demonstrates an example of this process. The aim of the integration was to produce a systemic interdisciplinary understanding, which consists of the chosen disciplinary sub-systems and their links, and explains the overall phenomenon that has been studied (*Newell, 2001; Repko, 2009:310*).

Evaluate the interdisciplinary theoretical construct

After the development of the interdisciplinary understanding, it was also essential to verify whether the proposed theorization was able to meet the requirements of a well-constructed theory (*idea inspired by Holton & Lowe, 2007*). Therefore, the researcher reviewed relevant literature on how to evaluate a theory, and, after making the necessary adaptations according to the unique needs of the current work, developed ten criteria (*table 10*) that were considered appropriate for assessing the consistency of the proposed framework (*i.e. Brookfield, 1992; Dubin 1978; Jayanti, 2011; Lincoln & Lynham, 2011; Patterson, 1986*). In addition, apart from evaluative dimensions, these criteria played the role of research aims, in the sense that the researcher used them as drivers for building the interdisciplinary construct of this work. Finally, the reader should keep in mind that while the researcher's aim was to develop genuine evaluative dimensions that would meet the specific needs of this work, in many cases exact phrases have been extracted from the existing criteria that have met this requirement.

Criterion	Description
1. Importance & Meaningfulness	A theory is important, or else significant, when it is related to (<i>Patterson, 1986</i>), as well as provides scientific explanation (<i>Mansilla, 2005</i>) and deep understanding of (<i>Lincoln & Lynham, 2011</i>), "actual" events, behaviours and general phenomena that concern social life.
2. Logically consistent insightfulness	The "traditional" inductive and deductive reasoning to theory development were complemented by abductive logic, which allowed imaginary creativity to emerge and formulate new theoretical interdisciplinary constructs (<i>pragmatism: Jayanti, 2011</i>) of higher and leveraged understanding (<i>Mansilla, 2005</i>). These constructs need to be insightful and can accommodate "some" ambiguity (<i>Lincoln & Lynham, 2011</i>), without, though, losing internal consistency (<i>Patterson, 1986</i>) or their logical basis to other-external literature (<i>Dubin, 1978</i>) & practice (<i>Brookfield, 1992</i>).

3. Narrative & illustrative elegance	The complex theorization needs to be narratively elegant, and conceptually rich, provocative and evocative (<i>Lincoln & Lynham, 2011</i>), with adequate use of illustrative techniques (<i>i.e. figures/images, tables, examples when necessary</i>) to facilitate the establishment of a clear understanding (<i>Jayanti, 2011</i>) as well as make any assumptions clear (<i>Brookfield, 1992</i>).
4. Mutuality of concepts & descriptive logic	The complex theorization and its formalized outputs (<i>Jayanti, 2011</i>) should be conceptualized in propositions (<i>Brookfield, 1992</i>) that are clear and explicit enough (<i>Lincoln & Lynham, 2011</i>), so that they can: 1) Be Put into action by practitioners 2) Be Used and tested by other researchers.
5. Fruitfulness & provocativeness	Theoretical elaborations must be fruitful and provocative, in the sense that they not only illuminate some aspect of social life but also allow room for critique (<i>Mansilla, 2005</i>) and, thus, suggest new avenues of research and/or action (<i>Lincoln & Lynham, 2011</i>).
6. Transferability & transportability	The theoretical framework should illustrate, clearly enough, its usefulness for other users (<i>in their own situation/context</i>) and, thus, invite them (<i>Brookfield, 1992</i>) to conduct additional research according to the following dimensions (<i>Lincoln & Lynham, 2011</i>): 1) Transferability: the ability in individuals, through interaction between the knower and the known, to carry propositional and/or tacit knowledge from one context to inform another, 2) Transportability: the applicability to different populations, of utility in varying contexts, with varying populations.
7. Interdisciplinary transferability	During an interdisciplinary study distinct disciplines & fields of study collaborate and, without abolishing their autonomous operation, generate a collective understanding of a research issue (<i>Aboelela, et al. 2007; Repko, 2006</i>). From this perspective, and by following the 6 th criterion of transferability & transportability (<i>Brookfield, 1992; Lincoln & Lynham, 2011</i>), it can be argued that interdisciplinary transferability concerns the extent to which theorists from the involved disciplines can realize: 1) Contributions of their own discipline/field to the problem under investigation, 2) Advances in their discipline/ field due to the generated interdisciplinary understanding and, thus, become able to conduct further research on the basis of carrying knowledge from the interdisciplinary to the single-disciplinary level and vice versa.

8. Empirical verifiability	The theory should generate new knowledge (<i>Patterson, 1986</i>) that match some element of socially constructed life, as this is judged based on the ‘lived experience’ (i.e. <i>personal experience, meaning-making, or general observations</i>) of the respondents (<i>Lincoln & Lynham, 2011</i>).
9. Usefulness & applicability	The theoretical advances must be useful and applicable for ordinary persons, suggesting ways of being in the world, or ways of altering one’s circumstances in some context (<i>Mansilla, 2005</i>). Specifically, it should provide (<i>Lincoln & Lynham, 2011</i>): 1) new ways of seeing things, such that meaningful change can occur, 2) models for human flourishing, as living knowledge, and for practical application and high organizational performance.
10. Compellingness & Prompt to action	The theoretical framework should provide a good conceptual understanding of practice and create a prompt to action on the part of a wider set of audiences/stakeholders who have a legitimate stake in the findings. Essentially, it should connect theory with action and learning for continuous refinement and improvement, illustrate practicality of the theory (<i>Lincoln & Lynham, 2011</i>) by assisting in the realization of certain social and political values (<i>for a better world</i>) and in improving social and political condition (<i>Brookfield 1992</i>).

Table 10. Criteria for evaluating the interdisciplinary understanding

Specifically, *Patterson’s (1986)* criteria, which are the most popular ones in the literature, were considered to be inappropriate for direct adoption, since they focus on reviewing theories that have been developed under the positivistic paradigm (*in Lincoln & Lynham, 2011*). For example, his criteria of “Parsimony & simplicity” and “Comprehensiveness” could not be used in order to evaluate a theory that, by its very nature, is underlined by the need for long-scale narration and refers to the creative processes of human imagination. Therefore, *Lincoln & Lynham’s (2011)* criteria for assessing a theory that has been conceptualized under the interpretivistic paradigm, and *Mansilla’s (2005)* criteria for evaluating interdisciplinary theories, were utilized as a basis. In addition, influences from the abductive reasoning which was followed in order to formulate the current work’s interdisciplinary (*Repko, 2006*) understanding (*criteria for pragmatic reasoning in Jayanti, 2011*), the intention to develop mainly a formal theory (*Brookfield, 1992*), as well as the criterion of “Logical consistency” which is suitable for assessing the conceptualization phase of theory development (*Dubin, 1978*)

were taken into consideration. Further analysis of the process that has been followed can be found at *appendix 5.7*.

Ultimately, the interdisciplinary understanding that satisfied the criteria listed above was considered as ready to be conceptualized into a theoretical framework/model (*phase of operationalization; Lynham, 2002*). It should be clarified though, that this integration was taking place gradually, as the process of constructing the model of this work was extremely dynamic. In other words, the researcher had to use the feedback loop (*fig8: Q.3*) many times to revisit the literature and retrieve additional useful sources that could further enhance the incomplete theoretical advancements. The feedback loops that have been followed are reflected in the three question that the researcher has added to *Repko's (2006)* model for conducting interdisciplinary research.

3 The fundamentals of the schema change process

The current chapter aims to introduce the reader to the general underpinning philosophy of this research. The analysis of the research problem made clear that in order for action to be decided, and, thereby, an OC to be instigated, a mental shift regarding how leaders perceive and act in respect to a specific change issue is necessary. At this stage, the researcher will explain how the need for such a mental shift, and, thereby, for an organizational transformation is legitimized. Then, the cognitive and more precisely schematic approach to change will be approached and a suitable model that can work as the basis for developing the theoretical construct of this work will be identified. The chapter will conclude by introducing the notion of cognitive discrepancy, which, will establish the basis for developing and discussing the principles and the logic of resistance to change.

3.1 Core theories, principles & philosophical assumptions

3.1.1 Objective reality & the legitimization of the need for change

Before any further analysis, it is essential to clarify the philosophical basis behind the existence of a need for change. *Taber & Lodge (2006)* question the boundary line between tenable scepticism and reasonless bias when it comes to changing pre-existing political beliefs and attitudes. The current work faces a similar challenge, since its fundamental assumption, according to which a change advocate(s) “rightly” understands the need for change and an executive “wrongly” resists it, seems to lack coherence. Indeed, if someone considers the various, and most of the times contradictory, philosophical considerations regarding the essence of good-right and evil-wrong (*cf. Ogorek, 2006:78*), it is worth wondering what gives the “right” to the change advocate to be “right”. In this sense, the work faces a fundamental question that shakes its “keystones”; that is “what legitimizes the need for change?”.

A specific determination of the end state is not necessary, yet, in principle, it can be argued that a need for change suggests that the current reality is in a sense problematic and requires change (*Cowan, 1986; Kilmann & Mitroff, 1979; Smith, 1989*). The issue of legitimisation emanates from the determination of the current reality and, therefore, it is highly dependent on the ontological and the concomitant epistemological

assumptions of the individual-reader (*Krauss, 2005*). For that reason, the researcher will demonstrate how the need is legitimized from the perspectives of an extreme objectivist as well as subjectivist, so that the reader can adapt his/her understanding and proceed to the rest of the work according to his/her position on the spectrum encompassed by these two extremes (*for the basic assumptions refer to Morgan & Smircich, 1980*).

General Approach (<i>Morgan & Smircich, 1980</i>)	Objectivist	Subjectivist
Paradigm (<i>Guba & Lincoln, 1994</i>)	Positivism	Constructivism
Philosophical basis (<i>Bowie, 2004; Jowett, 2014</i>)	Plato	Protagoras
Ontological assumptions (<i>Charney, et al. 1995</i>)	Absolutism/ Realism	Relativism
Epistemological assumptions (<i>Krauss, 2005</i>)	Truth exists out there & is to be discovered	Meaning is to be constructed by subjects
The need is legitimized by	Facts realized by an Elite	Democratic deliberation

Table 11. Philosophical paradigms & the legitimization of the need for change

From an objectivistic point of view, reality is something external to the human beings and given its concrete and structured essence it can be modelled and determined on an absolute basis (*McMurray, Pearson, Scott & Pace, 2004:10; Morgan & Smircich, 1980*). The inception of this paradigm can be traced back in Plato's theory of Forms (*Bowie, 2004:13*), which support that absolute truths (*Charney, Newman & Palmquist, 1995*) exist independently of what individuals perceive and believe the reality to be (*Krauss, 2005*). Thence it arises that the need for change is indicated and legitimized solely by the facts, or else the in-"Form"-ation, that the change advocate presents to the board of directors (*i.e. financial crisis Pasmore, 2011; consistent with Kotter's view*). Respectively, the process of rejecting change concerns the intellectual ability of the organizational elites to perceive these absolute truths (*the Platonic view in Alexander, 1989*) and, thereby, justify the power that is unquestionably given to top executives, by the current heretical and "totalitarian" in nature business paradigm (*Chomsky, 1996*), to initiate change (*i.e. Falkowski, Pedigo, Smith & Swanson, 1998*).

For a subjectivist, what exists in the natural world lacks inherent meaning (*McMurray, Pearson, Scott & Pace, 2004:10*), and it is the individuals who construct (*Krauss, 2005*), through imagination and social interactions (*refer also to Castoriadis, 1987*), the reality within which they exist (*Morgan & Smircich, 1980*). The notion that any perception is valid for the observer-individual is traced back in Protagorean relativism (*Bowie, 2004:13*), which, if it is considered at the level of organized societies (*Versenyi, 1962*), can explain how reality is “determined” under the subjectivistic paradigm. In particular, individuals do not live in the void but continuously interact, and, given the absence of an absolute reality, collectively construct an intersubjective world (*Zilioii, 2002*). This interaction occurs on a footing of equality, since Protagoras through his famous doctrine “the man is the measure of all things” (*in Versenyi, 1962*), suggests that everyone is equally entitled to be right, and, thereby, gives the power to the majority (*Alexander 1989*). In this sense, Protagorean relativism justifies the democratic imperative (*Rochnik, 2014*), according to which the people collectively conceptualize a reality that has the ability for a very specific point within the infinite space-time to phenomenally get out of the “Heraclitian flux of becoming” (*Osborne, 2003:99*) and name itself a momentary “absolute being” (*refer also to Yoon Cheol, 2012*). On this basis, it accrues that reality is determined and consequently the need for change is legitimized by the majority in the institution (*consistent with De Burgundy, 1996*), which, then, makes the question of resistance an issue of consonance between the power that executives possess (*Chomsky, 1996*) and the will of the members.

The two paradigms described above should be considered as the two ends of a spectrum. By criticizing the Platonic absolutism for being completely detached from humanity (*i.e. Schiller, 1908*) or suggesting that the Protagorean relativism requires a unchangeable and pre-determined absolute to validate the rightness of the subjective opinions (*i.e. Watson, 1907*), the individual moves away from the extremes to more modest world views. An example is the doctrine of evaluativism (*Charney, et al. 1995*) which reconciles the two extremes, by suggesting that individuals who hold different views approach the objective reality through sound and scientific reasoning (*Bett, 1989; Hales, 1997; Megill, 1995*). Apparently, there are plenty of paradigms, yet, it goes beyond this research’s scope to discuss how objective reality is determined according to each of them. Nevertheless, after the previous analysis and the specific example

provided in the appendix (*app. 3*), the reader should be able to understand how the need is legitimized according to his/her position on the spectrum.

3.1.2 The role of mental models & schemas

The purpose of cognitive psychology is to shed light on how people acquire, process, and utilize information by studying human mental processes (*Esgate, Grrome & Baker, 2005:2; Groome & Dewart, 1999:2; Kellogg, 2002:4; Sternberg & Mio, 2009:2*). One of the main and general conclusions in cognitive psychology is that human cognition is a mixture between what the objective reality is and what the individual expects the reality to be (*Eysenck & Keane, 2005:1*). This inherent notion of subjectivity (*Sampson, 1981*), which also seems to be the reason why leaders avoid taking action (*q.v. sec. 1.5*), has its roots in individuals' schemas and mental models; constructs that lie at the core of cognitive science (*Held, Knauff & Vosgerau, 2006:5*). In particular, when a situation is interpreted, its objective characteristics (*sec. 23.2.1 for the philosophical assumptions regarding objective reality*) are denatured by receivers' internal representations of reality, as a mental model's structure tends to maintain the perceived and not the objective structure of the faced situation (*Doyle & Ford, 1998; Palermo, 1986*). That is to say, stimuli could be misinterpreted, or even be replaced (*Al-Diban, 2012:2200*), as individuals' mental models impose meaning to the stimuli.

The process of mental shift can, then, be described by considering the role of schemas in information processing and their link to mental models. It is true that the two terms have been used interchangeably in the literature (*Gaglio & Winter, 2009:309*), but differences do exist and it is crucial to clarify them in order to establish an understanding concerning the rest of the work. When individuals receive information, schemas are invoked for analysing the stimuli and understanding the environment (*Ikiuga, 2007:63*). They do so through the two major functions with which they have been attributed within the concept of perception and information processing. That is, on the one hand they are responsible for the formalization of expectations which navigate individuals' information "sensors"; on the other hand, they are the basis upon which the selected data is interpreted (*Braune & Foshay, 1983*). Once the processing of information is completed, the invoked schemas will construct a mental model (*Al-Diban, 2012:2200*), which is a cognitive representation of the specific situation

(Lipshitz & Shaul, 1997:293; Michon, 1986:55). In its turn, the mental model will determine individuals' perception of and response to the stimuli (Senge, 2006:8).

It is logical, then, to suggest that for a mental shift to occur and, thereby, change to be instigated, existing schemas have to "integrate" the new evidence (Bartunek, *et al.* 2011) and "construct" a different, yet consistent with the needs that are indicated by the received evidence, mental model. In this sense, despite the fact that it is mental models which provide the distorted perception of reality, the mechanism for it lies in schemas. Indeed, mental models, unlike fixed schemas, are dynamic in nature (Callahan, 2005:270) and could undergo transformation. More precisely, mental models are not part of people's long term memory and are continually reconstructed based on schemas. The reason why mental models seem to be constant is because individuals tend to invoke the same set of schemas which lead them to develop a mental model similar to the one used in the past (Schnotz & Preub, 1999:150). Focusing, therefore, on schemas seems essential for understanding why leaders may ignore as well as neglect evidence that demonstrate the need for change.

3.1.3 A model of schematic information processing

Schema change has not been ignored by organizational researchers, yet, there is a fundamental key issue that makes existing approaches insufficient for the needs of the current work, and, hence, calls for the development of a new theory. That is, the focus of researchers on the lower levels of the organizational hierarchy (Labianca, Gray & Brass, 2000). More precisely, within the scope of change management, schema theory (Lau & Woodman, 1995) has mainly focused on identifying antecedents for enabling change in employees' schemas. The yearning outcomes are expected to be employees' positive attitude towards the already initiated change as well as increased participation and commitment on their behalf (*i.e.* Arzenšek, 2011; Balogun, Johnson, 2004; Chiang, 2010; Kayser, Walker & Demaio, 2000; Lau, Tse, & Zhou, 2002; Liu, Lui & Man, 2009; Thompson, & Ryan, 2012). This area of research is indeed useful for the change literature, yet irrelevant to the nature of this work, since its results ignore the necessary schematic changes at an individual-leadership level (Thompson & Ryan, 2011), where the call for transformation will be made in first place. In addition, the necessary demands for a schema change to occur at an individual level have also been disregarded, since the analysis has been restricted mainly in shared schemas and belief

systems (Labianca, Gray & Brass, 2000) which are considered from an overall organizational perspective (*i.e.* Björkman, 1989).

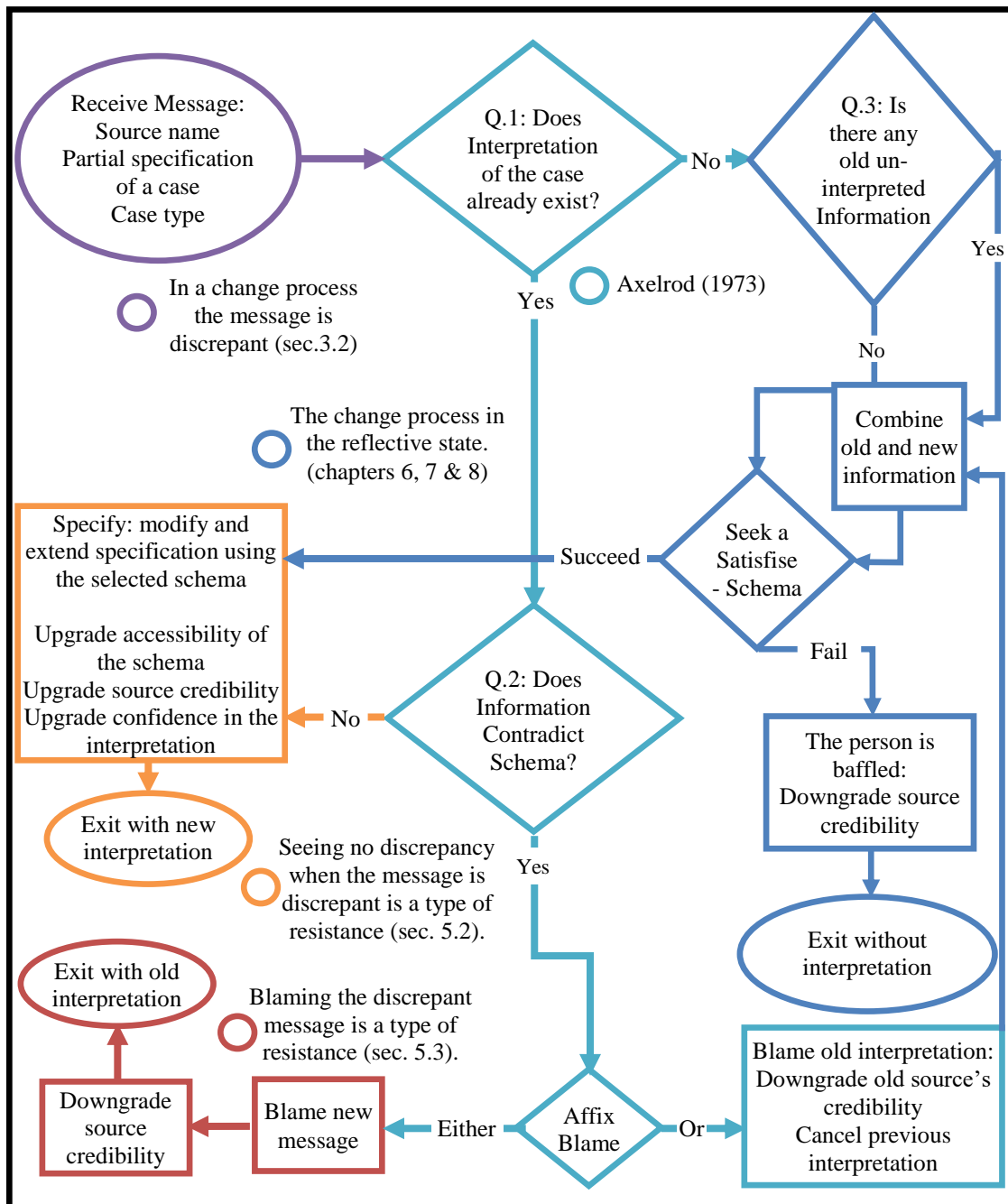


Figure 9. Schematic interpretation of information (Based on Axelrod, 1973)

Driven by the described fundamental difference in focus, the researcher sought a model that combines two major “ingredients” of this work, individual schemas and information processing, so that it can be used as the basis for further analysis. Among the schema based models that were identified in the literature (*i.e.* Beck, & Clark, 1997; Braune & Foshay, 1983; Labianca, Gray & Brass, 2000; Noble, Boehm-Davis &

Grosz, 1986; Norman, & Bobrow, 1976:118; Reger &, Palmer 1996), Axelrod's (1973) has been discerned, mainly because it demonstrates, through a simple logic of yes or no step-questions, the channels that information should pass through when it is processed by schemas. *Hastie (1981:45)* has also developed an identical, yet simplified version of *Axelrod's (1973)* model, which, however, was discarded due to its lack regarding the depth of analysis. In addition to its detailed perspective, *Axelrod's (1973)* model is widely known as the incipience of the schematic approach in political science (*Bolland, 1985*), and its logic has been utilized in studies of decision making, in which it provided deeper understanding and insight (*Lee, Chung & Kim, 2004*). The previous evidence led the researcher to appraise *Axelrod's (1973)* model as the best available choice for the basis of this work's arguments.

Figure 9 illustrates *Axelrod's (1973)* model with slight changes in the expression of the steps, for better clarification and compatibility with the current work's terminology. The logic of the model is quite simple and linear. More precisely, the individual goes through a set of Yes or No questions (*i.e. Hastie, 1981*) with the aim of identifying a schema that will enable understanding of the incoming message³. Based on the chosen schema the individuals have three alternatives, exit with the old interpretation, exit with a new interpretation or exit without an interpretation (*Peterson, 1985*). However, despite the fact that the model seems suitable to be utilized as the theoretical basis of the current research, it is necessary to modify some of its elements in order to reflect the special conditions regarding change, which prevail in this work. The areas in which changes should be applied are coded with different colours and mainly concern the input and outputs of the model. The following section will present the changes in the input and the respective implications, which are essentially what drives the changes in the outputs that will be discussed throughout the work.

³ It should be clarified at this stage, that when the incoming information are sophisticated enough the individual utilizes a lot of schemas, and probably their subschemas, in order to interpret the case (*i.e. Norman, & Bobrow, 1976:118; Rumelhart, 1980:42*). However, for reasons of simplicity the word schema(s), within the scope of the current work, will refer to a holistic schema(s) which lies in the top of the schematic hierarchy and includes all those schemas that were utilized to interpret the discrepant message (*sec. 5.4*).

3.2 Facing a discrepancy: An essential but undesirable reality

3.2.1 The notion of a discrepancy

Entman (1989) claims that *Axelrod's (1973)* model assumes that people will resist knowledge that contradicts their fundamental values and beliefs. Following this standpoint it could be argued that the most important difference between *Axelrod's (1973)* model and the requirements of a change process lies in the nature of the incoming information (*fig.10*). In particular, instead of neutral the initial message is discrepant to leaders' mental representation and expectations of the case at hand, while its aim is to manifest a compelling need for change (*Armenakis & Harris, 2002; Armenakis, Harris & Feild, 2000*). That is, a discrepancy indicates, in personal (*Higgins, 1987*) or business (*Kilmann & Mitroff, 1979*) level, a gap between "what actually is" and "what ought (*problem*) or potentially could (*opportunity*) be". To all intents and purposes, a change advocate conceptualizes the discrepant message either as a problem and predicament or as a need/opportunity for higher performance (*Buono & Jamieson, 2010:224*). In addition, consistent with *Kotter's (1996:35)* approach, through the communication of the discrepant message the change advocate aims to enhance commitment and urgency (*Armenakis, Harris & Mossholder, 1993*), so that change can become reality.

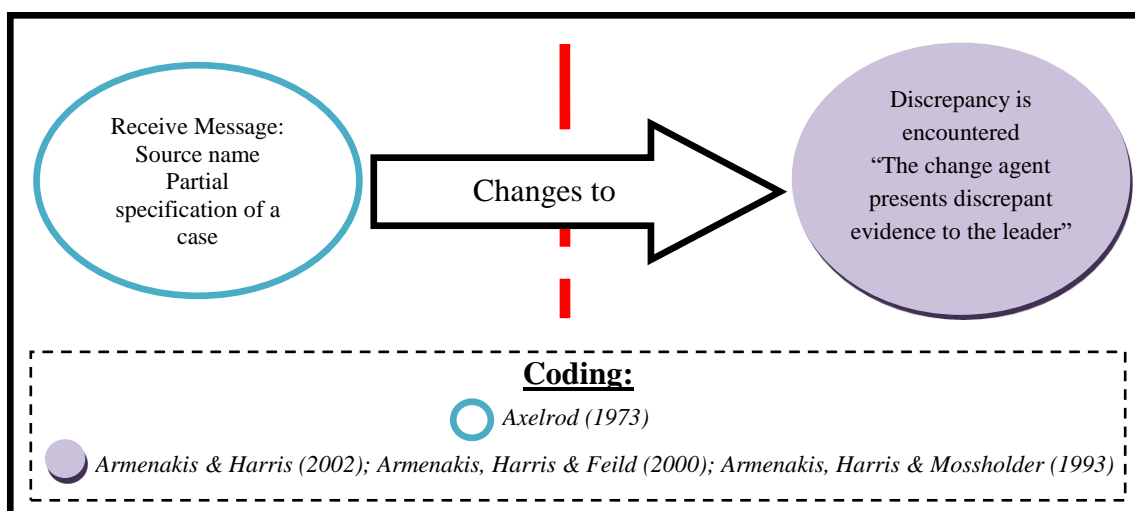


Figure 10. Discrepant nature of information

Rahschulte (2007:44) supports that realizing and understanding discrepancies is of major importance, since they are the crucial initiator for a PC program to occur. Indeed, once the discrepancy between someone's mental representations of a case and the reality of that case (*sec. 3.1.1*) is identified, it produces cognitive dissonance (*Festinger,*

1962; Van Overwalle & Jordens, 2002), which due to its motivational attributes (Elliot & Devine, 1994) develops an initial impetus to reduce the felt inconsistency and regain cognitive control of the case (Carver & Scheier, 1982; George and Jones, 2001). However, this otherwise clear cut relation between discrepancies and their concomitant reduction tendencies is violated by old schemas, which due to their inherent resistance qualities of self-conservation and reluctance to the new (Arzenšek, 2011; Larson, 1994) could halt the change process, even before the impetus to change is created. It is these resistant qualities that impose the need for significant alterations to Axelrod's (1973) model, so that the potential responses of leaders to discrepant information can be reflected.

Management theorists have already supported that leaders might avoid seeking negative feedback in order to prevent their self-esteem from being damaged (Ashford & Cummings, 1983) and retain the image of the competent manager (Millward, Asumeng & McDowal, 2010). However, seeking feedback is a choice, while in PCs compelling evidence is presented by the change advocate, with or without leaders' consent. Therefore, given that schemas preserve their inherent resistance qualities, not only during but also after the demonstration of the discordant information (Labianca, Gray & Brass, 2000), it is worth wondering which specific mechanisms could prevent leaders from accepting the compelling discrepancies that indicate the need for change. These issues are analysed in the following chapters (ch.5, 6, 7 & 8) and various resistant factors are introduced, which afterwards are integrated with Axelrod's (1973) model for developing a process based model of leaders' response to compelling evidence. Before this analysis, though, it is essential to clarify the fundamentals of the change process and the cognitive approach to the resistance to change.

3.2.2 Rationalization & the three cases of a schema change process

In principle, once a discrepancy is encountered leaders get motivated to engage in a schema change process to develop a new non-dissonant understanding (*q.v. sec. 3.1*). In their effort to do so, they cancel their previous schema-based interpretation, combine all the relevant information and then search in their cognitive repository for a schema(s) (*fig.9*) that could provide a new understanding of the evidence at hand (Axelrod, 1973; Rumelhart, 1980:43). It should be noted that according to Axelrod (1973) this process might lead to a new interpretation, yet it doesn't shed light on how new schemas are created. His claim abides by the mainstream view of schema theory that proposes

schema change to occur mainly by the rearrangement of previous mental structures (McVee, Dunsmore & Gavelek, 2005). Peterson (1985), on the other hand, mentions that, through the previous process, it is also possible for individuals to develop a new schema. That is, when there are no relevant schemas in the cognitive repository able to provide a new interpretation, the individual will have to build a new mental structure (Hastie 1981:45; Spiro, 1980:260). For that reason, the individual invokes subschemas analogous to the discrepant evidence and by compiling them, builds a new interpretation of the case at hand (Luke, 1985). In this way, the discrepant evidence will lead to the development of a new schema that will, on the one hand retain the novel, for the individual, qualities of the faced evidence (Krasny, Sadoski & Paivio, 2007), and on the other hand be consistent with an internal cognitive logic (Gioia, 1986:56).

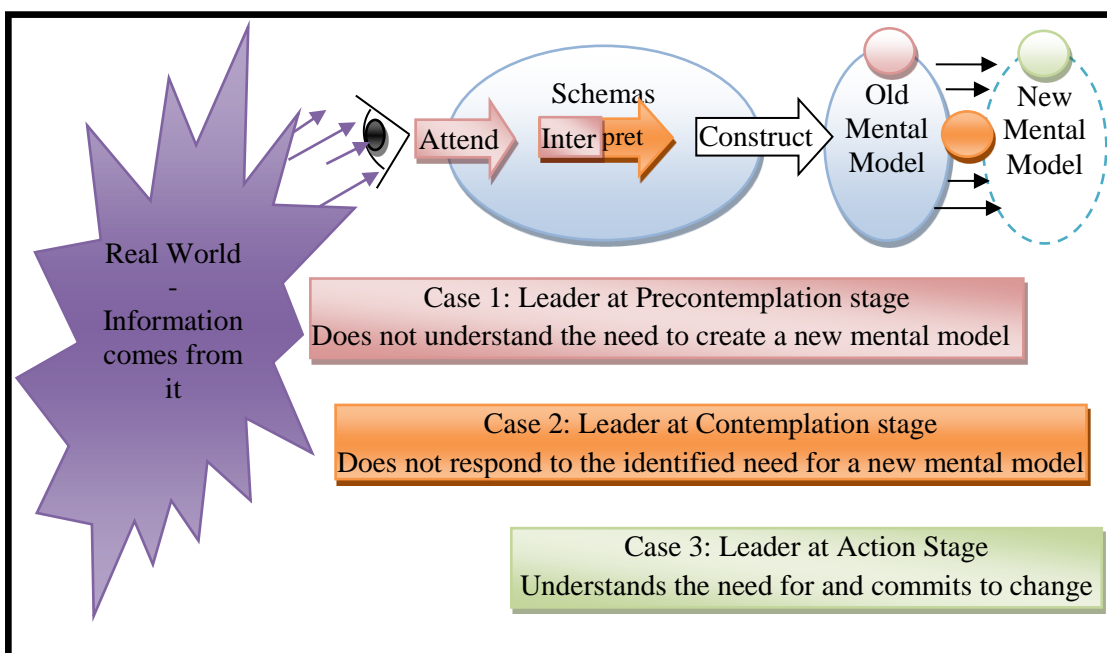


Figure 11. The three cases of mind-set change

A change process is not that straightforward though, since during change efforts the received evidence challenges existing schemas, which in their turn can resist change by rationalizing the need for change (George and Jones, 2001). The concept of rationalization dates back in Bartlett's (1932) experiments, during which he noticed that, when subjects were asked to recall a recently heard story, they tended to omit or explain what seemed to be incomprehensible. Despite Bartlett's (1932) focus on memory, his work is considered the incipience of modern schema theory (Roediger, 2003) and his general notion of schema has been appropriated by psychologists in different domains, including information processing (Beals, 1998). Indeed,

rationalization's two major characteristics, omitting and explaining the incomprehensible (*Bartlett, 1932:68*), coincide with the two major functions of schemas in information processing (*Rumelhart, 1980:51*), that is attention to and interpretation of information. It can be argued, therefore, that resistance to discrepancies could occur during leaders' processes of attention to and interpretation of the discrepant evidence (*Starbuck & Milliken, 1988:43*).

Essentially, in case of a "smooth" process, the result will be a schema change and, thereby, a new mental model that will lead to different actions. However, if rationalization occurs (*for "when" it occurs refer to ch.4*), the mental model will either remain the same or will change insufficiently, and, consequently, a distorted realization of the case at hand will be formulated (*Doyle & Ford, 1998; Palermo, 1986*). Following this logic and given the two main fallacies that were identified in the introduction of this work (*sec. 1.5*), three general cases exist (*fig.11*), based on which leaders can be categorized. In the first case belong leaders who do not understand the need for creating a new mental model. These leaders are in the precontemplation stage (*fig.2*) and in essence they "*bury their heads in the sand*" when they face a problem. Logically, then, the focus is on leaders' inability to perceive and understand the need for change (*i.e. Cummings & Worley, 2008:29*), which occurs when rationalization refers to the processes of attention to (*sec. 5.2*), as well as importance (*sec. 5.3*) and interpretation of the need to act now (*ch.6*).

On the other hand, if this need for a new mental model is realized, a leader will either proceed to the initiation of change (*case 3*) or will avoid the mental-shift (*case 2*). In the latter case leaders belong to the contemplation stage and they have to go through the preparation stage in order to take action (*fig.2*). The problem is mainly an issue of commitment (*i.e. Lippit, et al. 1958:131*), and occurs when rationalization refers to the process of interpreting urgency (*sec. 7.2*), causal responsibility (*sec. 7.3*), and, more importantly, coping potential issues (*ch.8*). Note that the stages of urgency and causal responsibility entail aspects of realizing the need as well as developing the necessary motivational impulses, which prevents their categorization into a specific case.

3.2.3 Basic cognitive responses to a discrepancy

The main responses to the evidence could be approached through *Piaget's (1954)* theory of cognitive development, according to which individuals use two main

processes for making sense of the environmental stimuli, namely assimilation and accommodation. Assimilation is the process of incorporating, sometimes by distorting, evidence into already established schemas, while accommodation is the process of changing existing schemas in order to adapt to incoming stimuli (*cf. Atherton, 2011*). Within the literature of change management, assimilation and accommodation correspond to what *Bartunek & Moch (1987)* respectively call first (*minor*) and second-third (*major-transformational*) order changes (*q.v. sec. 1.3.2*). If these theoretical perspectives, which have been widely utilized in order to determine conceptual differences regarding change programs (*i.e. Beazley & Gemmill, 2005; Gareis, 2010*), are considered as the two main responses to the received discrepancy, it is possible to develop a basic understanding of resistance.

In particular, transformational, or else second-third order changes (*Bartunek & Moch, 1987*), require either accommodation of the currently utilized schemas (*Lyddon, 1990*) or a shift to alternative ones (*Lord & Maher, 2005:217*). Leaders who undergo the process of rationalization, though, either avoid (attention) or distort (interpretation) the discrepant evidence, which results in extirpating the need for accommodation and consequently constitutes assimilation a sufficient response (*Chafetz, Spirtas & Frankel, 1998*), when actually it is not. Apparently, then, if the discrepant nature of the information is a given, this manipulation of the evidence in order to achieve the necessary and desirable fit with already existing schemas (*Axelrod, 1973*), indicates a case of resistance to the acceptance of the actual discrepancy, which aims to avoid, in a general sense, the psychological costs that accompany accommodation (*Block, 1982*). It should be noted that these “psychological costs” will be discussed throughout the work.

Someone could disagree with the idea of resistance, by counter arguing that *Axelrod's (1973)* model clearly depicts that even in case of no contradiction between new information and pre-existing beliefs (*fig.9 orange lines*), schematic interpretations could be extended and modified. While this would have been a valid argument, it doesn't cancel the previous logic, since even in this case, resistance occurs. As Piaget argued when individuals assimilate information, they simultaneously undergo a slight process of accommodation of their schemas, since the two processes are interrelated (*Bringuier & Piaget, 1989:36*). In other words, assimilation entails incremental adjustment of schemas, which is what *Axelrod (1973)* describes in his model.

Essentially, then, leaders who assimilate, apart from distorting the evidence, adjust their schemas, but within their own logical boundaries (*Johnson, 1988*), which leads to the belief that an incremental and adaptive change will be enough when a cognitive shift is necessary (*Sheldon, 1980*). However, as already has been stated, in transformational and major OCs, respective cognitive reinforcements of current schemas are insufficient, since a paradigmatic shift in individual and organizational level is mandatory (*Bartunek & Moch, 1987; Levy, 1986*). Apparently, then, the existence of resistance is justified in the sense that there is a conflict of perceptions, since the change advocate introduces evidence that indicates the need for a second-third order transformation while leaders apply either no or an incremental first order change.

4 A cognitive-emotional approach to changing schemas

It is widely accepted that a challenge to schemas and mental models places the individual in an emotional state. Therefore, the aim of the current chapter is to understand the role that emotions play in the schema change process. In the first part, a critique on the existing pure cognitive approaches will be provided, and a suitable theory to “accompany” the already developed cognitive approach will be suggested. Following this critique, the chapter will discuss the notion of motivation and the respective action tendencies that can be formulated as an outcome of the emotional experience. Finally, the researcher will focus on the defensive scenario by explaining how the morbid ego-centricity can instigate maladaptive emotion regulation and thus lead to the cognitive epiphenomenon of rationalization.

4.1 Introducing emotions to the schema change process

4.1.1 A critique on cognitive approaches & the importance of emotions

According to *Axelrod's (1973)* model, the response to the compelling evidence is determined by a set of computationally driven questions (*fig.9*), which reflect, in consistency with the underpinning philosophy of the existing change models (*sec. 1.5*), a deterministic sequence of steps (*compelling evidence* → *need* → *action*). This computational logic would have probably been the case, if pure cognition had been the only factor to affect the change process. However, neither the link between compelling evidence and need for change, nor the one between need and action are straightforward, since emotions intervene and moderate the cognitive process (*Storbeck & Clore, 2007*). More precisely, emotions on the one hand could oppose what individuals cognitively concede as a need for change (*Sloyan & Ludema, 2010:238*), and on the other hand are determinant factors for a schema change to occur (*Poole, Gioia & Gray, 1989*).

Emotions, therefore, should not be treated as positive or negative aspects of a schema change process, but as a constant factor which continually interacts with cognition during individuals' efforts to cancel their previous schemas and build a new interpretation (*Bartunek, 1984*). Paradoxically, though, despite cognitive researchers' initial agreement on the crucial role of emotions, they have separated the two concepts, a dichotomy which caused fundamental problems to organizational studies (*Strati,*

1998), since neither cognition nor emotion alone is adequate to explain every perceived phenomenon (Garreau, 2009). As Gratch & Marsella (2007:231) supports, it was only after a period of neglect, that cognitive theorists have reconsidered the importance of emotion, and reengaged it in their pure cognitive approaches. This trend has also been reflected in recent change management literature, with researchers adopting an approach according to which emotion and cognition induce change in common (*i.e.* George & Jones, 2001; Huy, 2001; Liu & Perrewé, 2005; Tobey & Manning, 2009).

There is no intention, at this stage, to provide a detailed view regarding the relation between emotion and cognition but only a brief introduction so that the reader can become familiar with the basics of this work's underpinning logic. In general, the two concepts are fundamentally interdependent with the one continually moderating the other (Storbeck & Clore, 2007). More precisely, cognition, without being the only mechanism able to do so (Izard, 1993), elicits emotions (*sec. 4.1*), while at the same time the produced emotional experience modulates, in terms of driving, cognitive processes (Marinier, Laird & Lewis, 2009). If this notion of interdependence is transferred to the concept of schema driven resistance (*sec. 3.2*), it can be argued that rationalization is a cognitive epiphenomenon, the motivational impulses of which lie in the mechanism of emotion regulation (Gross, 2001; Gross & Barrett, 2011). In essence, emotion regulation can be either adaptive or maladaptive (Mauss, Bunge & Gross, 2007), a bipolarity which respectively determines if what leaders perceive and decide will be consistent with the environmental needs or an outcome of cognitive rationalization (Brosch, Scherer, Grandjean & Sander, 2013)⁴. Based on this logic, the rest of the work will formulate the precise relationship between the two concepts, starting with the following sections which will introduce the general notion of emotion and a suitable theory for accompanying the schema change process.

4.1.2 The component-process approach to emotion

The nature of emotion has always been a challenging issue for thinkers and philosophers, who have tried to understand it since the era of the pre-Socratics in

⁴ Brosch, *et al.* (2013) use the phrase “emotions . . . functioning . . . normally” to describe the case when emotions operate as rational mechanisms. The slight difference in the terminology used, is due to the fact that the current work considers rationality as the ability to take adaptive actions in reference to the environmental needs indicated by the objective reality.

ancient Greece (*Solomon 2010:3*). Within the scope of the interrelated, yet novel compared to philosophy (*Mueller, 1979*), scientific discipline of psychology, researchers followed a similar path and tried to specify the essence of emotion (*Gendron, 2010*). Characteristically, *Kleinginna & Kleinginna (1981)* have already reviewed more than 100 definitions of emotion, which demonstrates that the community of psychologists have widely spread themselves on the subject. The existence of countless ways of defining and approaching emotion, as well as the concomitant ambiguity of the term, led authors to raise concerns regarding the usefulness of studying it as an autonomous scientific concept (*i.e. Duffy, 1934; Widen & Russell, 2010; Zachar, 2010*). Nevertheless, psychologists' interest in emotion has increased over the years (*Izard, 2010a*). Recently, it became clear that the uncertainty regarding the concept is a burden to overcome and therefore they initiated academic discussions with the aim of establishing a theoretical basis, which could be used as a reference for future research (*Russell, 2012*). The results demonstrated that, despite the important disagreements among the researchers (*i.e. Izard, 2010a; Kagan, 2010*), there is consensus regarding the multi-componential nature of emotion (*Izard, 2010b*). In this sense, *Mulligan & Scherer (2012a)* were right to support that not only a "partial-real" definition but also a general understanding of emotions has to be researched through the lens of emotional components.

Componential theories of emotion enjoy wide acceptance in recent years. Among them *Scherer's (2005a)* work seems to be the most influential one, as it has widely triggered the interest of the psychological academic community (*special issue introduced by Frijda, 2007a*). Despite disagreements on some important details of the theory and the need for improvements (*Frijda, 2007b; Loewenstein, 2007*), which will be considered throughout the work, *Scherer's (2005a)* theory has conceptualized current understanding on emotion and thereby constitutes an insightful basis for guiding future research (*Gotlib, 2007; Thoits, 2007*). In support of these arguments comes the fact that, *Scherer's (2005a)* list not only incorporates emotional components which have been suggested by other authors (*app.4*), but also, as *Moors (2009)* demonstrated, major theories of the past, despite their differences in respect to the process that intermediates between the stimulus (*input*) and the emotion (*output*), can be fitted into *Scherer's (2005a)* componential mould.

Organismic subsystem	Emotion Component	Emotion Function
Information processing	Cognitive component	Evaluation of objects and events
Support	Neurophysiological component	System regulation
Executive	Motivational component	Preparation and direction of action
Action	Motor expression component	Communication of reaction and behavioural intention
Monitor	Subjective feeling component	Monitoring of internal state and organism– environment interaction

Table 12. The component process theory (*Scherer, 2005a*)

Due to the many meanings that could be ascribed to emotion, *Izard (2010a)* suggests that each researcher has to contextualize it in the first place. Following *Scherer (2005a)*, this work suggests that an emotion is a dynamic process-episode (*Mulligan & Scherer 2012b*) of coordinated changes in five organismic subsystems, which is triggered by an important stimulus for the organism. Each subsystem underlies an emotional component and refers to a specific function (*table 12*). Contrary to the static perspectives (*i.e. Reisenzein, 2007*), the component process theory suggests that emotions are characterized by multidimensionality and a continuous interaction among the dimensions' components (*Scherer, 1982*). That is, emotions are not a single thing (*i.e. a feeling or facial expression*) but a process that deploys through the interaction of emotional components (*Niedenthal, Krauth-Gruber & Ric, 2006:9*).

4.1.3 The appraisal theories of emotion

The componential approach establishes a generic scope for studying emotional reactions to compelling evidence, yet, the need for additional delimitation is necessary. This is because the componential theory could be considered a general contextualization of emotion, which, however, does not specify the process of emotion causation. For that reason, among the various theories that follow the componential mould (*Moors, 2009*), the researcher, without excluding potential contributions from other approaches (*i.e. Sugu & Chatterjee, 2012*), considers the appraisal theories (*originated by Arnold, 1960; Lazarus, 1966*) to be the most suitable choice given the needs of the current work (*consistent with Scherer, 2009a*). In particular, there are three main and interrelated reasons for choosing the appraisal theories.

Initially, they seem to be in line with the general cognitive nature of this work, since they ascribe a primary role to the cognitive component (*Moors, Ellsworth, Scherer, & Frijda, 2013*). More precisely, an appraisal is a dynamic process, which derives from the natural for human beings mode of processing any stimuli received by the environment (*Frijda, 2013*), and, under common and regular conditions, affects and is affected by every aspect of emotion (*Franks, 2010*). During this process a stimulus is evaluated on the basis of a specific or a set of dimensions-variables, which results in an appraisal output that represents the meaning of the encountered case for the individual (*basic law of emotion: Frijda, 1988*). In its turn, this appraised meaning triggers the rest of the components (*table 12*) and causes the emotional experience (*Moors, 2013a*).

In addition, the dynamic appraisal theories have been suggested for, as well as applied in, research relevant to change management (*Klarner, By & Diefenbach, 2011*) and cognition (*i.e. Hudlicka, 2004*). For instance, *Liu & Perrewé (2005)* critiques the static perspective of previous attempts to study emotion in change management theory, and proceeds to describe employees' reaction to change events through the lens of an appraisal driven approach. Following a similar logic, *Gratch & Marsella, (2007:231)* critiqued the absence of emotion in cognitive theories and tried to link the two through the adoption of an appraisal-based perspective. Both examples suggest that individuals will adopt coping strategies, which are determined by the appraisal as well as the produced affective experiences, with the aim of responding to the changing environment.

Appraisal theories, thus, add the additional characteristic of adaptation to emotions, since they explain, through the cognitive component, how the interrelation of environmental and individual variables will lead to specific emotionally driven adaptive responses that serve individuals' well-being interests (*Roseman & Smith, 2001:7*). As *Folkman & Lazarus (1985)* supported, throughout an emotional process, individuals evaluate, in a dynamic and continually changing basis, their relationship with the environment and by adopting coping strategies they respond to any problem they may face (*Schorr, 2001:27.29*). Essentially, appraisal theories consider emotion as a process of continuous evaluations that links the outer with the inner world (*Oatley, 2007*) and, through this attribute of mediation, inform the individual regarding the need and the potential to respond in the light of novel evidence (*Scherer, 1993a*). Therefore, consistent with the work of *Reisenzein, Meyer & Schützwohl (1996)*, it is suggested that

the logic of appraisal theories is suitable for approaching the emotional reaction to discrepancies and, thereby, analysing the cognitive-schema change process.

4.2 The motivational system & its action tendencies

4.2.1 The interplay between goals, appraisals & valence

Goals and strivings, play a central role in the emotional process, since through their teleological function establish the basis so that appraisals can ascribe the affective meaning to the encountered event-stimulus (*Campos, Dahl & He, 2010*). Essentially, in any transaction with the environment, individuals invoke a set of conscious (*Barrett, et al. 2007*) as well as, automatically triggered (*Bargh & Chartrand, 1999*), unconscious goals that guide behaviour and adaptive action in reference to the environmental needs (*Bargh, Gollwitzer, Lee-Chai, Barndollar & Trötschel, 2001*). The adopted behaviour is part of an emotional episode (*Scherer, 2005a; components*) which, in its turn, is the outcome of a transactional in nature appraisal process (*Moors, 2013b*). This notion of transaction implies that general strivings, such as personal needs, goals and values, affect appraisals, since they operate in the background of the entire process (*Scherer, 2009a*), while at the same time their fate is determined by the outcome of these appraisals (*Moors, 2013b*). Thus, it seems that appraisals and general strivings-concerns communicate on a dynamic basis and shape the outcome of the emotional change process.

It is suggested that the means through which this communication occurs, is a macro valence, which underlies the emotional change process and can be either *positive* or *negative* (*Barrett, 2006; Russell, 2009: property of a core affective state*). In particular, appraisals ascribe, through their in-built micro-valences (*Scherer, 2010:57; 2013*), a sign to the overall macro-valence that is continually changing throughout the process (*Shuman, et al. 2013*). The logic according to which this sign is ascribed is a subjective determination of whether the received evidence should be rejected (*dislike*) or accepted (*like*) in respect to the dimension that is appraised (*Jung, 1971: par.724-725*). Essentially, then, the generated macro-valence reflects the positive (*appetitive*) or negative (*aversive*) consequences and implications (*Scherer, 2009a*) of a case at hand for someone's goals and general concerns (*Barrett, 2006; Castelfranchi, 2000*). In its turn, the formulated macro-valence affects subsequent appraisals not only of future events (*i.e. Kuppens, Champagne & Tuerlinckx, 2012*) but also of additional evidence

or appraisals in reference to different dimensions of the same event (*i.e. reappraisal in Ellsworth & Scherer, 2003:572; slightly similar argument made by Lazarus, 1999a:8*).

The suggested dynamic interplay between appraisals and macro-valence (*affect and cognition in Storbeck & Clore, 2007*) constitutes a motivational basis (*Lazarus, 2001:57*) of “valenced” neural circuits able to drive consciousness (*Lang, Bradley & Cuthbert, 1998*) to either avoid a punishment or approach a reward (*Ressler, 2010; Frijda, et al. 1989*). Upon this basic structure, human beings have developed sophisticated motivational systems that can generate complex coping responses able to deal with the demands of a case, as this is appraised along a set of evaluative dimensions and in reference to its implications for personal goals and concerns (*Fontaine & Scherer, 2013*). It could be argued, therefore, that during an emotional experience, motivation, emotion-affect and cognition (*triad in Lazarus, 1999a*) dynamically interact, and navigate leader’s goal-directed behaviour towards change (*Tobey & Manning, 2009*). The holistic form of such a behaviour will eventually be conceptualized in a decision to act or avoid responding to an encountered problem-crisis.

4.2.2 Emotional “rationality” & a response’s adaptiveness

It has been argued that the feeling function with its evaluative judgements is both rational and logical (*Corlett & Kessler, 2009*). More recently, *Scherer (2011)* has also supported the notion of emotional rationality and suggested that emotions provide an effective basis upon which adaptive decisions (*i.e. decisions for change*) could be taken. In this sense, someone would expect leaders who face a crisis to formulate an emotional experience that would eventually lead towards a set of necessary adaptive actions (*evolution and natural selection in Plutchik, 2001*). Yet, this is not always the case, since emotions can potentially function abnormally as irrational mechanisms that could lead individuals into adaptational troubles (*i.e. Brosch, Scherer, Grandjean & Sander, 2013*). On this basis, it can be suggested that the appropriateness of a leaders’ response can be judged based on the specific emotion that is experienced and, hence, the rationality that underpins its respective appraisals (*see Scherer, 2011*).

Note that the latter suggestion is, in a sense, superficial and can entail a muddle, as long as the appraisals are not considered along with the teleological nature of the concerns and goals that the appraiser(s) brings into the process (*Campos, Dahl & He, 2010*).

Indeed, rationality is a relative construct that depends on such concerns and goals as well as the overall social, political and economic context within which the appraisal process takes place and unfolds (*de Sousa, 1995; Volz & Hertwig, 2016*). For example, a behaviour or an action that seems to be rational and adaptive for the leader, who holds a specific set of goals, might be, or simply be regarded as being, fundamentally against the interests (*different goals*) of the system or group within which this leader operates (*i.e. preservation of personal power in Maner & Mead, 2010*). It can be argued, therefore, that the notion of relativity that accompanies the concept of rationality complicates the logical basis for judging a decision as being adaptive or maladaptive (*Lazarus, 1995b*).

How is it, then, possible to realize the adaptiveness of a response in general and in reference to the call for change? In principle, each of the potentially triggered emotions has a unique adaptational goal (*Malatesta-Magai & Culver, 1995*) that needs to meet, at least approximately, the objective environmental conditions (*Perrez & Reicherts, 1992:7*), as these are expressed by the evidence that the change advocate provides (*q.v. sec. 3.1*). Once the appraisal process comes to an end, this adaptational goal will be conceptualized as a coping strategy that aims to change the current relationship between individual-leader and the environment (*Folkman & Lazarus, 1988a*). As a result, leaders' original appraisal of the encounter will also change in the sense that when any evidence relevant to the case will be reappraised, the leader would formalize a different understanding and, consequently, elicit a different emotional response (*Folkman & Lazarus, 1988b*). Therefore, the crucial question that needs to be addressed is how do leaders cope and, consequently, move from the perceptual state of "evidence suggests transformational change" to the one in which "evidence does not suggest transformational change"?

4.2.3 The bipolar coping style: Defensive vs non-defensive action tendencies

An answer to the question that was put forward above is not simple, given the complexity that characterizes the coping literature (*Skinner, Edge, Altman & Sherwood, 2003*). Nevertheless, the current work approaches the coping aspect from a managerial point of view (*i.e. Tsui & Ashford, 1994*), which allows it to narrow the vagueness and, in a sense, develop a more definite theoretical approach. In particular, it is argued that leaders can cope either adaptively or maladaptively (*families of coping in Skinner, et al. 2003*). From a general point of view, the former category includes those ways of

coping that aim to reduce the discrepancy (*Tsui & Ashford, 1994*) and tackle the problem by taking action on the issues at hand (*problem-focused coping in Lazarus & Folkman, 1984:150*). On the other hand, maladaptive ways of coping reduce the discrepancy mainly by regulating the emotional experience (*emotion-focused coping in Lazarus & Folkman, 1984:150*), a response which avoids the actual need for change and, thereby, compromises the action on the issue with the aim of defending the honour of leaders' ego (*i.e. Tsui & Ashford, 1994*).

It should be clarified that the two families of coping are not mutually exclusive. That is, the adaptive coping strategies, simultaneously with any direct action on the issue at hand, function as emotion's regulators as well and vice versa (*Skinner, et al. 2003*). Indeed, the aspect of emotion regulation, which more or less characterizes every coping strategy, encumber a clear distinction between maladaptive-defensive and adaptive coping (*Miceli & Castelfranchi, 2001*). Nevertheless, despite this hassle, a major difference could be traced in the fact that maladaptive coping includes those strategies that emanate from the operation of unconscious ego-defences (*Cramer, 1998*), the main aim of which is to protect the self from any discomfort caused by internal psychological conflicts (*distinction of defences and unconscious aspect of adaptive coping in Kramer, 2010*). Following this point of view, maladaptive emotion-focused strategies are distinguished from the emotion-focused function of problem-focused strategies, in the sense that they distort reality (*Lazarus & Folkman, 1984:150*), as they primarily aim to regulate the emotion (*q.v. sec. 4.3*), instead of taking action in order to change what causes this emotion in first place (*similar distinction recommended by Bond & Bunce, 2000*).

Both families of coping strategies are underlain by an action tendency, which prepares the individual to engage in a kind of action (*Frijda, Kuipers & Ter Schure, 1989*). These action tendencies, as well as their corresponding actual coping responses that change advocates can elicit during the process (*Skinner, et al. 2003*), constitute the core of the change process map. From a general point of view, when leaders respond adaptively they initiate the change process (*cognitive accommodation*), an action that offers effective fit between individual and environmental needs (*Lazarus, 2000*), as these have been established by the "objective" reality within which the whole individual-environment transaction occurs (*sec. 3.1.1*). On the other hand, leaders who respond maladaptively are expected to initiate no or inadequate change (*cognitive assimilation*)

since their understanding is the “victim” of some kind of defence mechanism (*Cramer, 1998*). It goes without saying that both of these coping behaviours are relevant to the change process. Nevertheless, it is the later maladaptive case (*analysed in the following section*) which interests the researcher, since the focus of the whole work is on “why change doesn’t occur”.

4.3 Leaders & the concept of ego-driven defensiveness to change

4.3.1 Introduction to the ego-centric responses

It is suggested that an otherwise smooth adaptive navigation to the environmental needs (*Plutchik, 2001*) could be inhibited under conditions of increased attachment to someone’s ego identity and personal goals (*Lazarus, 1995a; 1995b; see also Young, & Logsdon, 2005*). Of course, the ego-self should not and cannot be disregarded, since emotions are in fact strategies used for protecting self-esteem and dignity (*Solomon, 1993: xvii; 129*). However, this doesn’t mean that they are egoistic (*see Nussbaum, 2001:52*), but suggests that whether an adaptive action to the need for change will be adopted or not depends on the way the ego-system will “*treat*” the received evidence (*Young, & Logsdon, 2005*). That is, a successful adaptation requires to balance between personal values, goals and beliefs, some of which lie in the unconscious mind, and the general environmental needs within which the whole emotional transaction occurs (*Lazarus, 1990:6*)⁵. Indeed, if this balance between self (*egoism*) and environment (*altruism*) doesn’t exist, efforts to preserve the ego identity can lead to adaptational problems (*Lazarus, 1995a*), within a social (*i.e. Jahr, 1929*), economic-political (*Martin Luther King in Korten, 2010:43*) as well as leadership (*see Avolio & Locke, 2002*) concept.

⁵ Following the discussion on the legitimization of the need for change (*sec. 3.1.1*), it arises that the environmental needs can be determined either by the evidence itself or by the perception of the majority (*or by a mix of the two depending on the reader’s position on the spectrum*). Respectively, maladaptive responses can occur because the leader either distorts the objective evidence (*objectivist view*) or distances from the will of the people (*subjectivist view*). Nevertheless, regardless of someone’s philosophical assumptions, the underpinning reason for maladaptation remains the same; that is, the preservation of leaders’ ego identity and the protection of its honour.

In business terms, system-goals, which are served by the evidence that indicate the need for change, should be accompanied by group-centric, instead of ego-centric, individual goals (*consistent with Crown & Rosse, 1995*). Of course, as human beings, leaders hold a variety of personal goals, yet the idea of an ego-driven resistance led the researcher to focus exclusively on the ones that can, when offended, trigger self-enhancing defence mechanisms (*for cognitive non-motivated biases see Chambers & Windschitl, 2004*). These goals refer to ego-involvements; that is personal commitments, such as beliefs, values and life goals, which constitute someone's ego-identity and play a determinant role in the appraisal process (*Lazarus, 1991a:150; 2006:92*). They are mainly expressed as actual or current (*i.e. I am a great inerrable leader*), ideal or "want to achieve" (*i.e. I want to prove "x" to my followers/society*), and "have to be" or "ought to" (*i.e. I have to be like "x"*) self-representations, which collectively constitute someone's ego/self-identity (*Higgins, 1987*).

Special importance to such goals has been given by theorists like *Lazarus (1991a; 2006:92: ego-involvement)* and, to a certain extent, *Scherer (2001:98: normative significance evaluation)* who differentiate between ego-oriented goals and other-type goals. Instead, other theorists, like *Roseman (2013)*, use a single construct that encompasses everything (*i.e. motives*). Within the scope of the current research, a logic of distinction is followed in the sense that ego-commitments are conceptualized as individual-oriented goals, which accompany throughout the process other general strivings regarding the system-business (*Crown & Rosse, 1995*), and can be distinguished from their social-oriented nature (*social species: Scherer, 2001:98*). Based on this distinction, a theory of resistance based on the defensive impact of "threatened" ego-commitments on the appraisal process (*Kumar, 2012; Rhine & Severance, 1970*) is possible to be conceived.

4.3.2 Contemporary leaders & their ego-identity

In order to understand how leaders' higher level goals, values and beliefs impact on the appraisal process, a consideration of the affective meaning that characterizes a leader's identity (*Rogers, Schröder & von Scheve, 2014*) under the societal norms within which he/she grows and operates is essential (*Robinson, 2014*). *Castoriadis (1987)* suggests that societies create a set of social imaginary significations, which, while being unjustifiable on a logical basis (*i.e. God*), are necessary for a society to operate, since they determine its reality-world and, consequently, the values as well as activities of its

members. Following this logic, the central imaginary signification and, thereby, the societal paradigm (*i.e.* Baumeister & Muraven, 1996) of the modern world, as this is reflected and reinforced in business education (*particularly in MBAs*), is characterized by ego-oriented behaviours (*ego-centric goals*) that serve to a large extent the self-interests of leaders at any level (Knights & O'Leary, 2006; *for a possible explanation see Becquemont, 2011*). In essence, business students (*future leaders*) graduate without having conquered the necessary balance between self-interest and responsibility to others (Giacalone, 2004). On the contrary, they learn to overemphasize personal gains, at the expense of other social values like ethos and cooperation (*i.e.* Giacalone & Wargo, 2010; Pfeffer & Fong, 2004). This is the result of an education that, with the blessings of the business world (Pfeffer, 2005), has been taken over by the ideology of economism, a basic axiom of which is the motivational force of maximizing self-interest (Hühn, 2013).

It could be argued that, it is because of this “economistic” mind-set why many leaders conduct inaccurate appraisals and, thereby, produce maladaptive emotions that operate against societies' sustainable growth (Bracher, 2012; Lazarus, 2001:60). Along this line, Scharmer & Kaufer (2013) call for leaders to transcend from an ego-system awareness (*ego-centric goals*), which serves exclusively their self-interests, to an eco-system one (*group-centric goals*), which considers the well-being of the whole system. In this higher level of consciousness leaders detach from their fixated egos and break down any sense of individualization, which consequently nourishes an intrinsic sense of otherness (Young & Logsdon, 2005 *calls it integral*; *see also Collins, 2001 level 5 leaders*). Internally, otherness is translated into consideration of followers' views, opinions as well as reactions to leaders' behaviour (Taylor, 2010). In addition, leaders who are driven by minimal egotism expand their impact beyond the limits of the organization by suppressing their self-interests in favour of more ethical (Knights & O'Leary, 2006) as well as environmentally friendly (Bergman, Westerman, Bergman Westerman & Daly, 2013) decisions.

Every individual, who operates within a specific environmental context, develops from an early age an ego-identity, that is a deeply ingrained theory of the self (Schwartz, 2001), which helps them to cognitively navigate in life (Berzonsky in White & Jones, 1996). Arguably, then, the educational (Sanford, 1956) as well as the general socio-cultural forces of the modern world (Baumeister & Muraven, 1996), provide the basis

for leaders to formulate an ego-identity that, consistent with the philosophical principles of social Darwinism and Taylor's approach to management (*cf. Dent & Bozeman, 2014*), overemphasizes their self-interest (*Miller, 1999*). In this sense, leaders, who have been taught as well as blindly abide by the current paradigm are expected to act defensively when their "super-ego" is threatened by evidence that indicates the need for change (*Kumar, 2012*). Characteristically, *Westerman, Bergman, Bergman & Daly (2012)* found out that business students compared to students from other disciplines demonstrate increased levels of narcissism, which makes them prone to ego-defensive strategies when this is considered to be necessary. This egotism, or else egocentricity, is by no means welcomed since in case of information that threatens the ego, it can engage leaders into unbalanced and biased appraisals (*Greenwald, 1980*).

4.3.3 Threatened ego-commitments & maladaptive emotion regulation

A crisis which is appraised as incongruent in reference to the held ego-commitments (*Lazarus, 1991a*) is expected to pose a threat to the leader's identity (*Petriglieri, 2011*). As a result, negative emotions will be triggered, the regulation of which will determine whether the need to change will be addressed successfully or not (*Sayegh, Anthony & Perrewe 2004*). On this basis, it can be argued that defensiveness occurs when leaders maladaptively regulate their emotional experience in order to minimize, or totally avoid, negative ego-threatening experiences (*Koole, 2009*). Regarding this proposition, it is essential to clarify that human beings use both conscious and unconscious processes in order to regulate and control their emotional impulses (*Gross, 2001*). Yet, the notion of "threatened" ego-commitments in the unconscious mind, led the researcher to focus on those that occur implicitly (*see Koole & Roethermund, 2011*). This type of emotion regulation occurs in the intuitive and unconscious level (*Gyurak, Gross & Etkin, 2011*) and, thus, it is an inherent aspect of the overall emotion process (*Gross, 1999; Fontaine, Scherer, Roesch & Ellsworth, 2007*) that aims to support the efforts of the individual to cope, defensively or not, with the emotional case at hand.

Implicit emotion regulation, similar to ego defences (*Gillett, 1987*), is mainly triggered and to a large extent formulated in the unconscious mind (*Gyurak, Gross & Etkin, 2011*). However, while it can be defensive, it should by no means be considered synonymous to ego defences (*Gross, 1998*). Indeed, the fact that the whole emotional change process is regulated by implicit and unconscious functions, does not mean that the leader will be either irrational or not able to successfully adapt in a continually

changing business world (*Bargh & Morsella, 2008*). Instead, the adaptiveness of individuals' actions and behaviour depends on whether the implicit emotion regulation will be adaptive by supporting appraisals to control the negative emotion and face the challenge (*consistent with Koole & Fockenberg, 2011*) or maladaptive by operating as the basis upon which defence mechanisms that distort the perceived evidence will be triggered (*Mauss, Bunge & Gross, 2007*).

More precisely, in the adaptive scenario, implicit emotion regulation supports the enhanced hot ego system, due to the evidence threatening the ego and the subsequent increased personal involvement (*Leon & Hernandez, 1998; Madrigal, 2008; Williams, Bargh, Nocera & Gray, 2009*) to accept the threat and cope with the faced crisis. However, when someone's beliefs and implicit theories are threatened (*Plaks, Grant & Dweck, 2005*) the ego can also be unconsciously motivated (*Westen, 1998*) to perform defensively, in order to protect the self from the received offensive stressors (*Mlodinow, 2012:201*). In this maladaptive scenario, the ego unconsciously formulates a defence content which is projected to consciousness (*Gillett, 1987*) as an inseparable part of the overall emotional experience (*maladaptive emotion regulation: Gross, 1999*). The outcome is a distorted meaning which on the one hand protects the attacked ego (*Menninger, 1954*) and the existing beliefs (*Robinson & Clore, 2001*), on the other hand diverges from the objective reality (*sec. 3.1.1*) that calls for action (*Lazarus, 1995a; 1995b; 1991a*).

To elaborate even further, the unconscious ego-commitments not only ascribe, similarly to all goals, the affective meaning to the received evidence (*Campos, et al. 2010*), but also can implicitly determine what individuals "want" to feel (*Tamir, Ford, & Ryan, 2012*) and, consequently, think (*Duncan & Barrett, 2007*). They do so by acting as "motivational" drivers that lead individuals to formulate, though the appraisal process, reasoning (*Kunda, 1990*) consistent with their "*internally represented desired states*" (*definition of goal: Karoly, 1999*). In such cases, individuals-leaders enter in a self-deceptive state in which, despite being aware of the objective evidence (*spoken by the change advocate*), produce, through cognitive processes that are hidden from awareness, an illusionary and rationalized, yet embraced by them, reality (*consistent with Balcells, 2008 notion of self-deception*). In case of threatened ego-commitments, this reality could, at least in the long run, have negative results for the company (*Williams, 2014*). This is because, it is the outcome of unconscious ego defensive

evaluations (*Greenwald, 1980*) that mainly aim to protect leaders' self-interests (*Gardner, Avolio, Luthans, May, & Walumbwa, 2005*) and the status quo that is attached to them (*Rhine & Severance, 1970*).

4.3.4 Mapping the maladaptive scenario

A call for further delimitation of the maladaptive scenario is established as long as its non-deterministic cause of elicitation is considered in combination with the fact that the actual change process unfolds mainly under the conscious surface. More precisely, the appraisals that drive the process as well as their impact on the rest of the emotional components occur unconsciously and it is only a part of these unconscious changes that, through the experienced subjective feeling (*Scherer, 2004*), are reflected to consciousness (*Scherer, 2005b*). This notion of unconscious dominance along with the fact that there is no need for every appraisal of the change process to occur in order to produce an emotion and its concomitant response-coping (*Frijda, 2013*), raises an interesting question. That is, "how can the change advocate understand at which stage-appraisal the leader appraises maladaptively the evidence?". Indeed, the fact that leaders can exit the change process by maladaptively regulating the emotion (*Koole, 2009*) at any stage-appraisal (*Frijda, 2013*) and without necessarily being aware of the reason why (*consistent with Scherer, 1995*), sets the development of a basic map, a necessary task.

In order to answer the raised question, it is essential to understand the central role that defence mechanisms play in the change process. In particular, it has already been stated that a response of "no or inadequate change" requires a kind of rationalization (*sec. 3.2*), the motivational impulses of which lie in the mechanism of emotion regulation (*3.3.1*). This affective dissociation (*emotion regulation*), accompanied by a kind of cognitive distortion of the evidence (*rationalization*), constitutes the basis of every possible defence mechanism (*the precise mechanism is going to be discussed throughout the work*) that could occur during the change process (*Bowins, 2004; Northoff, Bermppohl, Schoeneich & Boeker, 2007*). However, while their fundamentals are similar, each defence mechanism has discrete and unique characteristics (*Vaillant, 1992*), which pave the path for observable differentiations that could facilitate mapping the change process.

The component	Description	Reference
Cognitive understanding - (Defence mechanisms)	Defence mechanisms operate upon the appraisals and ascribe a specific character to the phenomenon of rationalization. Cognitive understanding of the need for change, therefore, will depend on the specific characteristics of the triggered defence mechanism.	<i>Vaillant (1992)</i>
Coping behaviours - instances	While every defence mechanism results in the general coping response of “no or inadequate change”, the specific coping behaviour depends on the characteristics of the triggered defence.	<i>Skinner, et al. (2003); Vaillant (1992)</i>
Subjective feelings	Each defence mechanism operates upon a specific appraisal which in its turn acquires a special role since it is the one that rationalizes the evidence. In this case the expressed feeling is expected to “denote” the crucial appraisal(s) since it will be mainly determined by it/them.	<i>Scherer & Ellsworth, (2013); Smith & Ellsworth (1987)</i>

Table 13. The components of the change process map

In essence, it is argued that, while rationalization is an observable cognitive phenomenon of leaders that resist learning from shocks (*Miller, 1993*), its particular expression (*Scherer, 2005a: cognitive component*) depends on the unique characteristics of the triggered defence mechanism. Similarly, while every defence mechanism belongs to the family of maladaptive coping (*sec. 4.2.3*) and is underlain by the general action tendency (*Scherer, 2005a: motivational component*) of avoiding change, it is expected that the specific coping behaviour-instance will differ respectively (*Skinner, et al. 2003*). Identifying, therefore, with each involved appraisal, the associated unconscious defence mechanisms (*1st component*) and their concomitant observable behaviours (*2nd component*) seems to be essential for mapping the change process.

Last but not least, the stage-appraisal at which leaders exit the change process can be traced by the consciously expressed subjective feeling (*Scherer, 2005a: feeling component*). In particular, the change process will include a set of appraisal-

dimensions, a standard combination of which is invariantly linked to the expression of a specific emotional experience (*Scherer & Ellsworth, 2013; contrary to Kuppens, 2013*) of mixed feelings (*Ellsworth & Smith, 1988*). In addition to that, while it is possible, yet not necessary (*Frijda, 2013*), for every appraisal of the change process to occur, some appraisals seem to be more central than others to the expression of an emotion (*Ellsworth & Smith, 1988; Smith & Ellsworth, 1987*). Logically, in cases of resistance, this “central role” is assigned by the impact of the defence mechanisms, in the sense that they indicate which appraisal rationalized the evidence (*for the link see above*) and, consequently produced a specific blend of feeling (*see also Scherer’s, 2011 notion of emphasizing on a specific SEC*). Thus, it is argued that the feeling(s) produced by the change process will “denote” the most crucial appraisal(s) and, for that reason, it is essential to include the feeling component in the map (*3rd component*). On this basis, the rest of this work sets out to research those cognitive constructs that underlie the change process and deploy them in the form of a dynamic framework that will include the highly interrelated components of the map.

5 Building a model of schematic reaction to discrepancies

This chapter sets out to identify the barriers which could prevent leaders from accepting the evidence that indicate the need for change. At this initial phase the individual belongs to the pre-contemplation stage, in which he/she is totally unaware of the need, and moves towards the contemplation one, in which his/her conscious awareness of the need to take action is established (*fig.2:26*). The transition to a more conscious state occurs when the evidence is appraised as discrepant to existing beliefs as well as relevant to leader's concerns. This necessary process, though, could be hindered by the impact of various defence mechanisms and cognitive barriers on the appraisals, which will be discussed throughout the chapter.

5.1 Elicitation of the cognitive-emotional process of schematic change

5.1.1 The relevance check: Determining the level of consciousness

Various theorists from different disciplines have proposed that any cognitive process of human beings could be categorized within two distinct systems of reasoning (*see Frankish, 2010, Frankish & Evans, 2009*). According to this theoretical perspective, individuals use cognitive processes which are either, unconscious, automatic and fast (*intuitive processes*) or conscious, automatic and slow (*reflective processes*), in order to make sense of the world and respond to its stimuli⁶. The logic of the duality as well as the concept of interrelation between the two systems have been conceptualized in different ways by different authors (*i.e Carruthers, 2009; De Neys, 2006; Lieberman, Gaunt, Gilbert & Trope, 2002: reflexion and reflection; Kahneman, 2011; see also Evans, 2008 table 1*). Others have also challenged the clear cut distinction between the systems and the idea of having only two of them (*i.e. Evans, 2006a*), and focused instead on two different types of processing (*Evans, 2008; Evans & Stanovich 2013*).

⁶ Traditionally, the distinction between System 1 and System 2 thinking (*first introduced by Stanovich, 1999*) is used in order to conceptualize the duality. However, recent advancements in the field led the researchers to argue in favour of abolishing this terminology and approach (*default-interventionist tradition: Evans & Stanovich, 2013; parallel-competitive tradition: Carruthers 2012*).

Within the scope of this work, the researcher follows the parallel-competitive tradition which seems to be the current trend in dual process theory (*Evans, 2008*). According to the adopted approach, the two systems do not operate in an either/or basis, but dynamically interact in order to formulate someone's understanding and, thus, determine the response to be taken (*inspired by Carruthers, 2009; Lieberman, et al. 2002*).

It can be argued that the intuitive processes, due to their natural primacy (*Louis & Sutton, 1991*), will analyse first the discrepant evidence. The covetable outcome of this evaluation is the engagement of the reflective mode of thinking, so that an insightful approach towards information processing (*Jett & George, 2003*) and, thereby, a thoughtful reconsideration of the established schemas (*Senge, 2006*) could be adopted. This seems to be necessary, as the schematic and based on existing beliefs intuitive-experiential thinking (*Epstein, 1994*) is inadequate by itself to face discrepancies that indicate unprecedented crisis (*Evans, 2003*), such as the ones that the current work is interested in (*sec. 1.3*). Essentially, the main concern at this very first stage of the change process is whether the individual will remain in the primitive automatic-unconscious mode or will transcend to a conscious one, in which the leader reflects on the case at hand (*Lieberman, et al. 2002*).

Determination of consciousness level		
Appraisal of relevance (<i>Dutton, 1993</i>)	Strategic perspective (<i>Scherer, 2001; 2013</i>)	Description of the check
Novelty occurrence check	Familiarity of the issue	(When) Event is sudden, (familiar), unpredictable
Intrinsic relevance/pleasantness check	Level of issue evaluation (<i>positive or negative</i>)	(When) Event is in itself un/pleasant for the person
Concern pertinence/relevance	Level of Self-relevance	(When) Event is important and relevant for person's goals and concerns

Table 14. The appraisal of concern relevance

Along similar lines, *Dutton (1993)* has proposed three factors that determine a decision maker's level of consciousness during the diagnosis of strategic issues. His factors correspond to what *Scherer (2001:95; 2013)* suggests to be the constituent parts,

including novelty, intrinsic pleasantness and concern pertinence, of a relevance check (*table 14*). On this basis it is argued that human beings' inborn unconscious and automatic appraising mechanisms (*Ekman, 2004:121*) evaluate the situation in respect to its relevance for someone's concerns and general well-being (*Reisenzein, 2006*). The appraisals of relevance, which was later on conceptualized by *Frijda (1988)* as the law of concern, plays a determinant role in the elicitation of the emotional experience (*Deonna & Scherer, 2010; Frijda & Scherer, 2009:142*) and, thereby, has a huge impact on the schema change process. This is because it directs attention to the received threat (*Scherer, 2009b*), which will allow the leader to reflect on and respond to the problem adaptively.

5.1.2 Facing a discrepancy & the appraisal of concern relevance

Evidence from neuroscience suggests that novelty and intrinsic pleasantness precede other evaluation checks due to their simple, primary and rapid nature (*Grandjean & Scherer, 2008; Scherer, 1993a*). In this sense, when discrepant evidence that issues an urgent appeal for change is received (*sec. 3.2*), the individual will unconsciously and automatically evaluate its attributes of novelty, by searching for a schema that could explain the case at hand (*Axelrod, 1973*). Along with the novelty check, the outcome of which is the one that determines both the next phase in the model as well as the level of consciousness (*fig.12*), the individual evaluates, almost simultaneously (*Ellsworth, 2013*), the intrinsic pleasantness of the evidence (*Scherer, 2001:95;2013*). While this appraisal is not included in *Axelrod's (1973)* approach, its consideration is of crucial importance, since it provides an initial sense of desirability (*Reisenzein, 2001:195*) that plays a determinant role throughout the relevance check (*sec. 5.1.3*).

There are two potential ways for the leader to realize the novel and discrepant nature of the evidence and, thereby, to proceed towards the next sub-check. On the one hand, if there is no suitable schema the individual's brain will automatically recognize the stimuli as uncommon-novel (*Brosch, & Sander, 2013*). On the other hand if there is a suitable schema the individual understands the faced situation as known and proceeds to an automatic (*Leventhal & Scherer, 1987*) "comparison" of the evidence with the schema itself (*Axelrod, 1973*). Such a comparison, given the discrepant nature of the evidence, compared to the established practices, should lead the individual to realize novelty in terms of schematic unexpectedness (*Frijda, 1993*). In this way, the unconscious mind understands that "business as usual" is no more the case and, thus,

sets the basis for the reflective mind to engage in the process (*cavalry in Lieberman, et al. 2002*).

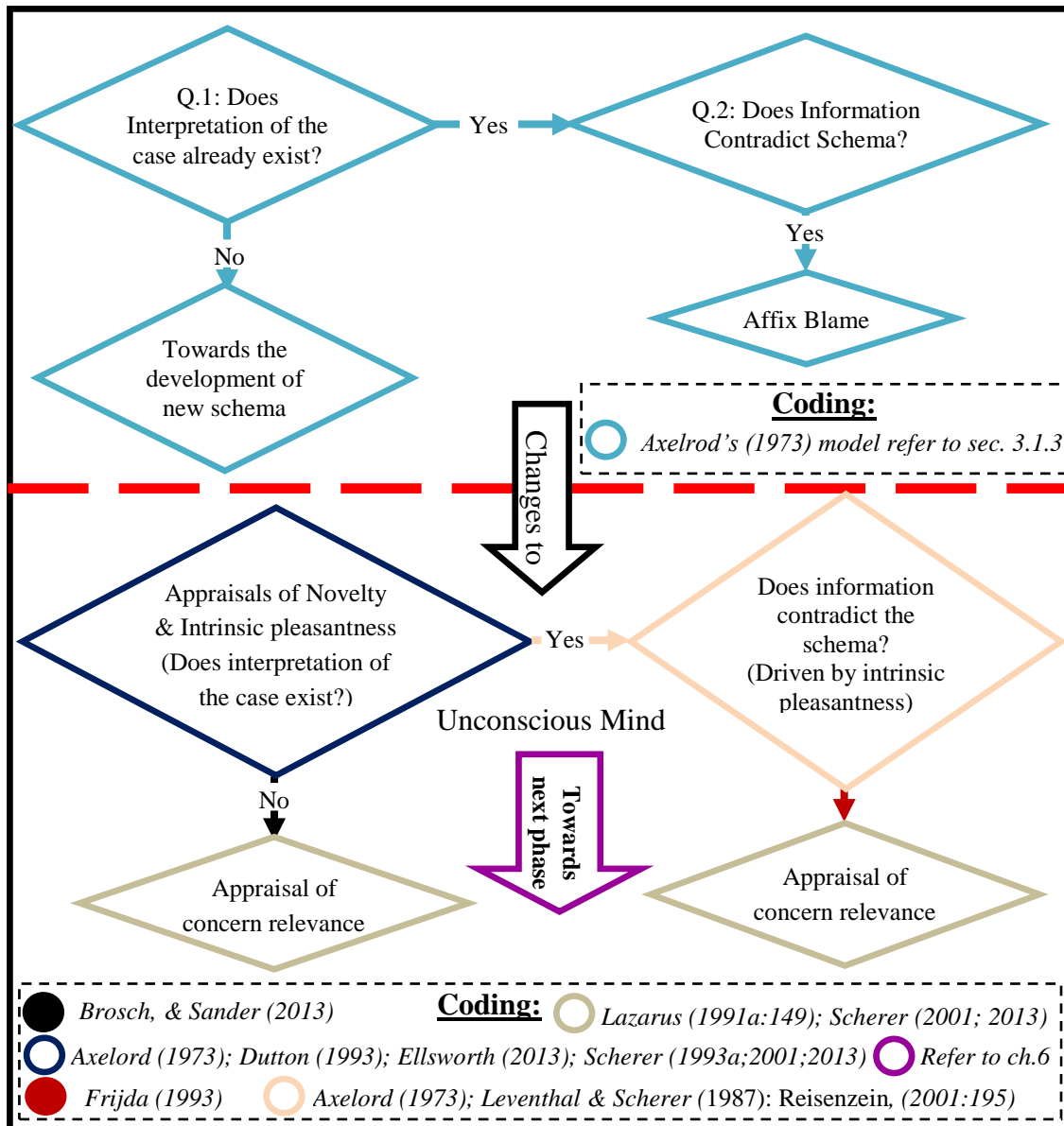


Figure 12. Appraisals of Novelty and Intrinsic Pleasantness

From a pure cognitive point of view (*consistent with Axelrod, 1973*), if the discrepancy is accepted, the individual proceeds to the next phase of the change process, in which he/she affixes the blame for the discrepancy either to the self-schemas (*adaptive*) or to the message (*maladaptive*). However, the current work treats the concept of blaming current schemas as an aspect of a dynamic emotional change process (*Folkman & Lazarus, 1985; Lazarus, 1991a*) which takes place through a series of cognitive evaluations (*q.v. ch. 6*). In order for this evaluation to take place though, it is necessary that the individual conducts an automatic and rapid appraisal (*Brosch & Sander, 2013*;

Epstein, 1994) of the novel stimuli with the aim of determining whether the evidence at hand is relevant or irrelevant to his/her goals, concerns and general strivings (*Laazarus, 1991; Scherer, 2001*). The outcome will emerge to the preconscious mind, from where it can access consciousness (*Dehaene, Changeux, Naccache, Sackur & Sergent, 2006*). In this way, when the unconscious mind traces something important for the self, it can instantly trigger individual's conscious attention (*Afamasaga, 2009; Scheele, 2000:103*) and, thereby, the individual proceeds to a reflective state, where further evaluations of the evidence will occur.

5.1.3 Defence in the automatic/unconscious state: Denying the discrepancy

The previous analysis supports that, under normal conditions, no matter if novelty is realized directly, as an uncommon situation, or indirectly as discrepant evidence, the individual will proceed to a preconscious appraisal of the stimuli in respect to its relevance to the individual's concerns (*Scherer, 2001:95; 2013*), which afterwards will elicit the necessary, for a schema change to occur, emotional episode (*sec. 4.1*). However, neither the schematic comparison nor the sub-check of relevance is that clear-cut. As *George & Jones (2001)* suggest, individuals can rationalize the discrepancy and cease the change process even before the elicitation of the necessary emotional experience occurs. This is because, via the appraisal of intrinsic pleasantness (*Scherer, 2001*) individuals detect in an unconscious level the painful affect that accompanies cognitive discrepancies (*Harmon-Jones, 2000; or even the word change itself: see Slovic, Finucane, Peters & MacGregor, 2007 on affect heuristic*), and, thus, they can potentially respond defensively to the call for change.

In particular, this intrinsic to the evidence negative valence (*Scherer, 2013*) leads individuals to regulate their emotional experience, which is not even properly initiated, in order to protect themselves from the forthcoming threat (*Mauss, Bunge & Gross, 2007*). In this sense, and given the distinction on emotion regulation that has already been discussed (*ch.4*), the fate of the change process depends on whether the regulation is adaptive, which means that the change process proceeds, or maladaptive, which means that resistance is manifested (*refer to sec. 4.3*). Regarding the defensive scenario at this initial phase of the appraisal process (*Scherer, 2001*), it is argued that maladaptive regulation occurs via the mechanism of attentional deployment (*Gross & Barrett, 2011*), which operates as a basis for the defence of denial to be activated (*Leigh & Reiser, 1982; Nadler & Tushman, 1989; Wheeler & Lord, 1999*). Once individuals

engage in denial, they “manipulate” unconsciously their attentional processes/resources (*Gross & Barrett, 2011*), and consequently rationalize the discrepancy by omitting undesirable evidence (*Bartlett, 1932*). Essentially, denial will prevent most, if not all, of the disturbing thoughts, which in this case concern the realization of the discrepant evidence, from emerging to consciousness (*Dorpat, 1983; Vaillant, 1992:271*).

The emotion regulation and the concomitant cognitive rationalization at this stage are able to restrict the aim of a discrepancy. That is, to put individuals into a reflective mode in which they reconsider their schemas (*Senge, 2006*) and adopt an insightful approach towards information processing (*Jett & George, 2003*). In such cases, individuals remain in a condition of automatic information processing regarding the issue at hand, in which existing beliefs drive behaviour (*Epstein, 1994*). This is not inherently negative, however, when the external environment changes dramatically the automatic system becomes unable to trace the need for something fundamentally new (*Slovic, et al. 2007*), and, therefore, the necessary new cognitive schemas for triggering change have dramatically less chances to be developed (*Reger & Palmer, 1996*). As a result, instead of accepting the need for something new, leaders are expected to counter-propose arguments picked up “directly” from their inadequate repository of experiences and old beliefs, which might have given explanations in the past yet could hinder the necessary change in the future (consistent with the paradox of success *Audia, Locke & Smith, 2000*; “*Icarus paradox*” *Miller, 1992*). In addition, consistent with the concept of schematic rationalization in terms of omitting incomprehensible evidence (*Bartlett, 1932*), these arguments will support a case of no discrepancy at all, which indicates that leaders exit the change process without understanding the need for change (*case 1: refer to sec. 3.2.2*). Based on this logic, the following sections will attempt to capture the ways according to which the case of no discrepancy (*denial*) can be formulated and expressed throughout the relevance check, so that an understanding of the change process in the automatic/unconscious state can be developed.

5.2 Unconsciously assimilating the discrepancy

5.2.1 Unconscious assimilation & discrepancy blindness

As noted above when the individual possesses a schema for the case, an unconscious and automatic comparison between evidence and schema will occur (*Axelord, 1973; Leventhal & Scherer, 1987*), which should result in the realization of the discrepant

evidence (Frijda, 1993). However, Axelrod (1973) provides an additional outcome of this schema-evidence comparison, according to which individuals perceive no discrepancy (fig.9: no to the second question) and consequently interpret information with the existing schema. This might be absolutely normal for Axelrod's (1973) model, which assumes the neutrality of the incoming information, yet under the current work's assumptions it should be treated as a case of resistance.

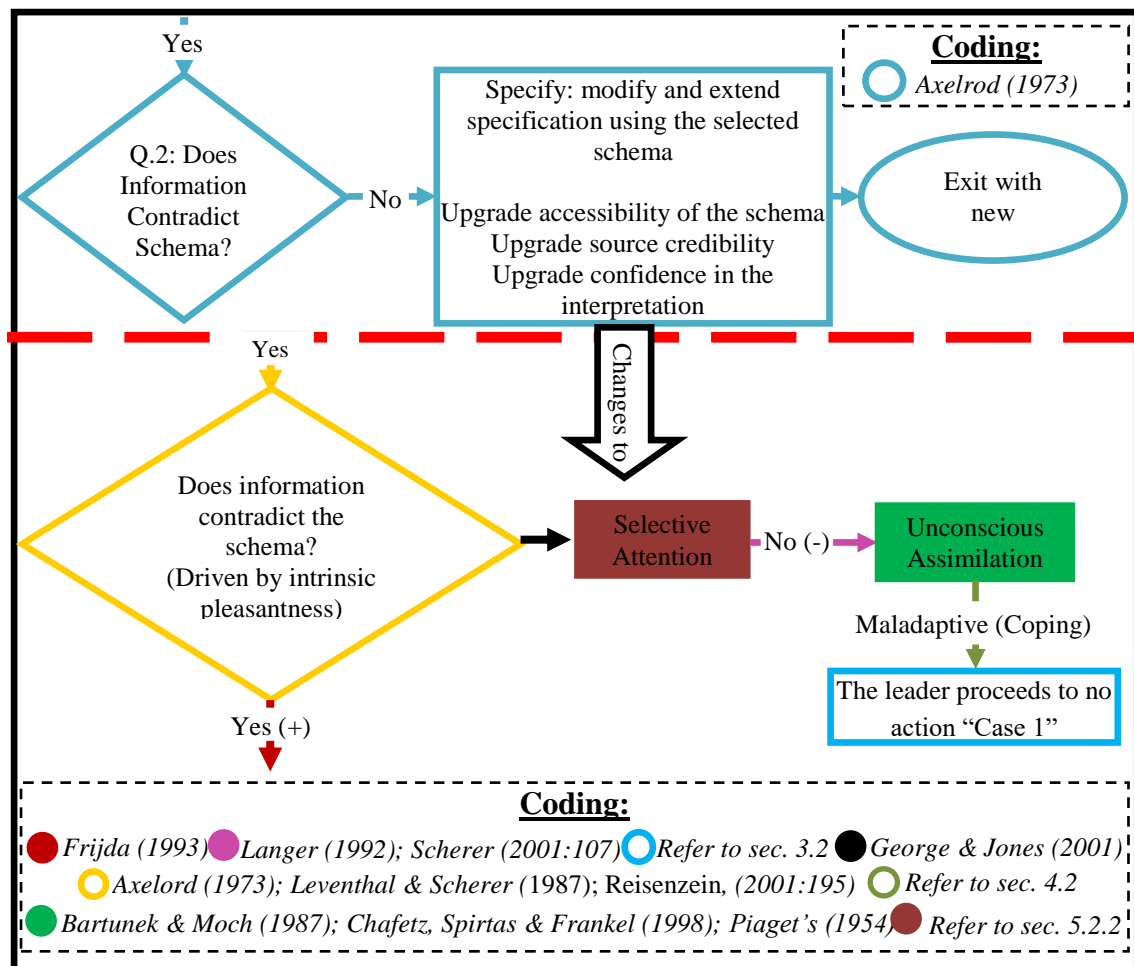


Figure 13. Assimilation of discrepancies

Purcell (1986) explains that responses to schematic discrepancies differ between individuals, since the same discrepant situation could be unpleasant for some and exciting for others. Consistent with this logic, the initial sense of desirability which derives from the appraisal of intrinsic pleasantness (Reizenstein, 2001:195), will determine the response at this stage. In general, the very unpleasant and undesirable intrinsic pleasantness of the discrepancy will create tendencies to "get less" from the faced situation (Scherer, 2001:107). Yet, it is the way that these repulsive intentions are conceptualized that plays the key role regarding the change process. On the one

hand, the undesirability of the discrepant evidence, could undergo the process of adaptive emotion regulation (*sec. 5.1.3*), which allows the individual to accept, in an unconscious level, the existence of the discrepancy (*i.e. painful but need to be accepted reality*) and, thus, proceed to the next phase of the change process (*figure 13: Yes: +*). On the contrary, if the undesirability of the discrepant evidence is regulated maladaptively (*sec. 5.1.3*), the triggered defence mechanism will lead the individual to avoid any further interaction with the situation at hand and, thus, exit the change process (*figure 13: No: -*). In this latter case the leader enters into a mindless state in which he/she cannot realize the novelty of the evidence (*Langer, 1992*), which, as it will be analysed below, is an outcome of defensive allocation of attentional resources.

5.2.2 The mechanism of selective attention

It is argued that resistance could occur due to schemas' property to lead the individual in a state where he/she selectively chooses the stimuli to be processed (*Markus & Zajonc, 1985:152*). As *Karlsson, Loewenstein & Seppi (2009)* argued, individuals will avoid seeking definitive information when the general context, to which this information refers to, suggests a potential threat to the self. Indeed, it seems that individuals are biased in favour of allocating their attention to schema-conforming stimuli (*Johnston & Dark, 1986*), while simultaneously they tend to ignore any exceptions in respect to their schema based expectations (*Fiske & Taylor, 1991:150*). Through this manipulation of attentional processes, leaders "unconsciously" assimilate the discrepancy and, thus, inhibit any conscious realization or even consideration of it (*Bartlett, 1932; Dorpat, 1983; Gross & Barrett, 2011*). That is, because selective attention naturally comes before any interpretation processes, the distortion of the received message will by definition constitute interpretation incapable of understanding the need for change (*similar to Leigh & Reiser's 1982 input subsystem*).

Ultimately, schemas play a fundamental role since they can bias someone's attention in favour of specific stimuli and thereby affect subsequent evaluations of the case at hand (*Phillips & Lord, 1982*). Similar issues with attentional malfunctions could take place when it comes to organizational and leaders' cognition as well. Given that environmental scanning, from a cognitive perspective, is the process of receiving triggers from the environment that could change managers' cognitive frames (*El Sawy & Pauchant, 1988*), selective attention could prevent a leader from understanding the need for change by controlling which stimuli are perceived. Indeed, the choice of what

to pay attention to could be a determinant factor for companies' awakening and realization of the need for change (*Gavetti & Rivkin, 2007*). However, an organization's dominant logic could prevent leaders from noticing stimuli that are different to what they were used to or expected to perceive (*Prahalad, 2004*). Therefore, it could be assumed that leaders will demonstrate attention biases, driven by their schemas, when they face discrepancies.

According to the analysis that has been presented above, leaders, driven by their schemas, selectively choose the evidence to process and, thereby, deny the existence of any discrepancy (*rationalization based on omitting Bartlett, 1932*). In this sense, someone could argue that given the change advocate's intervention the case of selective attention lacks meaning, since the compelling evidence will be presented no matter what. It should be clarified though, that this argument lacks validity, since there is a difference between avoiding exposure to threatening information from defensively manipulating attentional resources to already received information (*Balcetis, 2008*). Indeed, inconsistent information does attract schemas' attention (*Brewer & Lambert, 1993:256*), which suggests that the problem is not individuals not perceiving the stimuli. On the contrary, they are aware of their existence but they unconsciously either ignore them (*Fiske & Taylor, 1991:150*), or do not include them in the interpretation processes (*Kiesler & Sproull, 1982*).

5.3 Disengage from the discrepancy

5.3.1 Psychological disengagement as resistance to change

When the appraisal of novelty is completed, the novel evidence, charged with an initial sense of un/desirability, will go through the third sub-check of goal relevance or else concern pertinence (*Lazarus, 1991a:149; Scherer, 2001:95; 2013*). This evaluation is essential for the emotional experience to occur (*Moors, 2007*) and, consequently, for the leader to engage in further action (*Scherer, 2001:110*). Relevant and discrepant evidence, though, apart from preparing individuals for action (*Scherer, 2001:110*), could also cease any effort, since it poses a challenge to their self-esteem. In this case, the unconscious mind has the ability to prevent conscious processing of any thoughts that could cause harm (*Dare, Dreher, Holder & Sandler, 2012:93*), something which leads the individual to exit the change process by denying the message's relevance to his/her concerns (*Ellsworth, 2013; Frijda, 1986:455*). This controversial condition, in

which the individual avoids the state of dissonance by distancing him/herself from the already perceived discrepant evidence (*appraisal of novelty*), can be explained by the defensive strategy of psychological disengagement (*Schmader, Major & Gramzow, 2001*). According to this psychological phenomenon, the individual detaches the self from a specific domain (*domain of concern in appraisal terms*) and its outcomes, with the aim of preventing his/her self-esteem from being damaged, in case of negative performance in this domain (*Major & Schmader, 1998*).

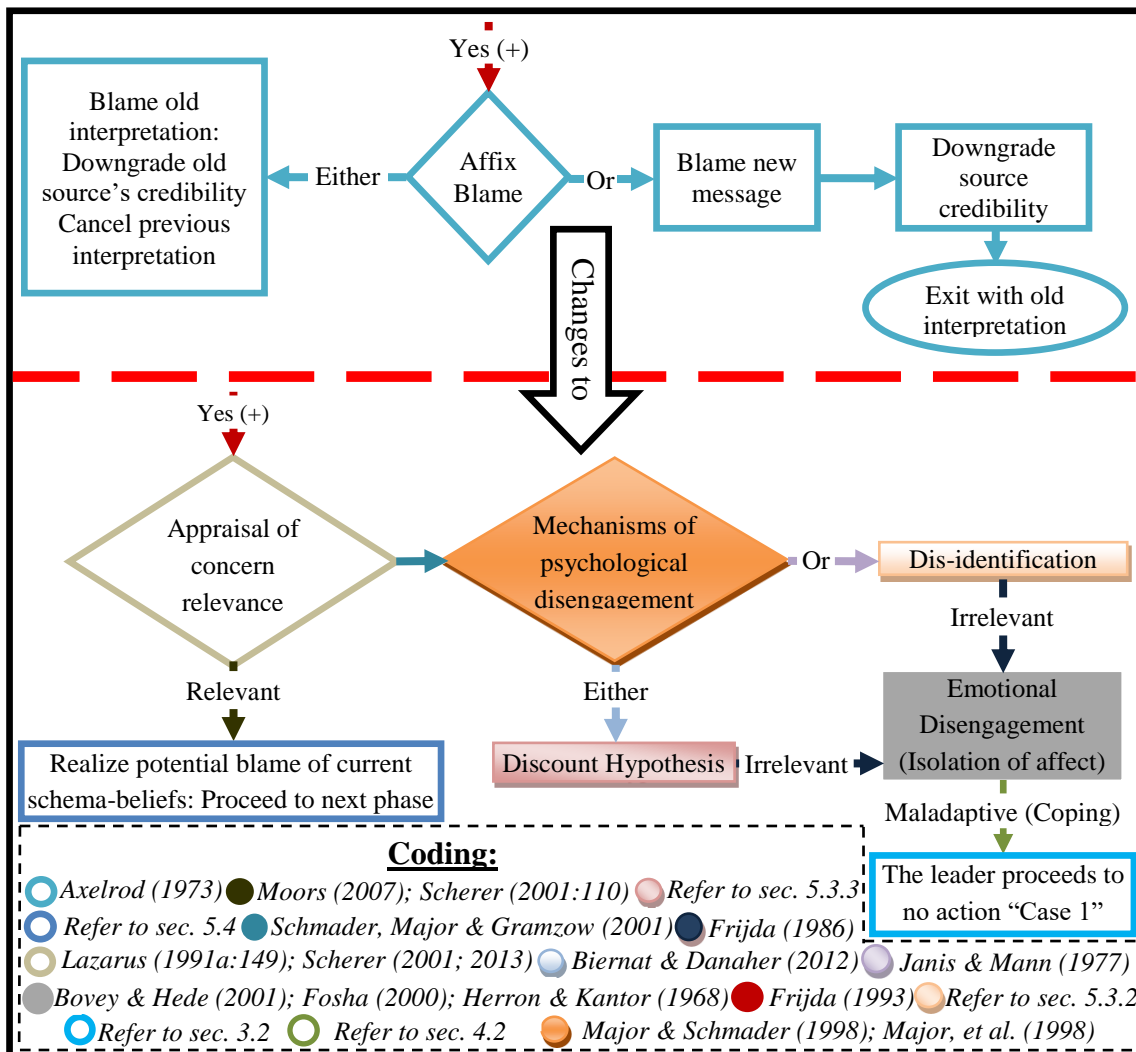


Figure 14. Discrepancy blindness

While stigma, prejudices and stereotypes, which directly impact on self-esteem, are the basis upon which psychological disengagement is built, resistance to the compelling evidence is caused not by self-esteem's protection per se, but by individuals' emotional disengagement from a challenging domain (*Major & Schmader, 1998; Nussbaum & Steele, 2007*). As *Crocker, Major & Steele (2003:529)* commented in respect to *Major, Spencer, Schmader, Wolfe & Crocker's (1998)* experimental results, disidentified

individuals were emotionally invulnerable to negative feedback. In this sense, and consistent with *Monson & Freman's* (2012:82) claim regarding people who suffer from posttraumatic stress disorder, it could be argued that individuals have developed mechanisms of disengagement for proactively preventing themselves from experiencing additional negative emotions (*emotion regulation in Gross & Barrett, 2011*). That is, the leader “isolates the affect”, and its concomitant motivational and transformational power (*Fosha, 2000:4-22, Herron & Kantor, 1968*), from pure cognitive thinking, a process which serves as a defensive mechanism against the compelling appeals for change (*Bovey & Hede, 2001*). Instead, a non-reflective and defensive response (*i.e. getting angry with the messenger*), which is driven by the negative affect that has already been produced through the evaluative dimension of intrinsic pleasantness, will be formulated (*the affect heuristic Slovic, et al. 2007*). As a result, as long as the reflective mind does not get engaged the need for change will remain unanswered (*see Frijda, 2010a: impulsive vs reflective action*).

It should be clarified that psychological disengagement from a domain and any feedback related to it could be either chronic or temporary. The former indicates a feedback related to it could be either chronic or temporary. The former indicates a trait of the individual's self and constitutes an automatic protective mechanism (*Hyland, 1987*) for dealing with negative evaluations regarding a domain, while the latter is more of a situational response to a particular incident (*Major, et al. 1998*). Although, both types could put an end to the change process, chronic disengagement will more likely lead to inaction, since temporary, or else situational, disengagement could entail, in the long run, motivational attributes and higher efforts for improvement in respect to the challenging domain (*Nussbaum & Steele, 2007; or else, leads eventually to the next stage of the change process: refer to sec. 5.4*). Based on this logic, the current work focuses mainly on chronic disengagement and argues that there are two mechanisms able to explain why leaders can remain passive and take no action towards change, while they have already accepted the discrepant nature of the received information (*fig.14*).

The first mechanism is the discounting hypothesis (*sec. 5.3.3*), which is consistent with what *Axelrod (1973)* describes as sources' downgrade. *Janis & Mann (1977:54)* claimed that when individuals face warning information, the credibility of the communicator plays a significant role in their decision to proceed into the adoption of

protective actions. In a similar sense, within the scope of organizational change, under specific psychological as well as business conditions (*sec. 5.3.3*), leaders could discount the diagnostic character of the feedback in respect to a specific situation, by perceiving it as an outcome of prejudiced dispositions against them (*Crocker & Major, 1989*). In addition, apart from discounting the message, recent research has shown that stigmatized individuals who face negative feedback could also disidentify with the domain of the inconsistency (*Biernat & Danaher, 2012*). According to this logic, leaders, who suffer from a potential attribution of the failure stigma, could disidentify with a specific problematic domain (*Steele, 1992*) within their business and reorient their focus to different ones (*sec. 5.3.2*). Each mechanism entails various costs, like societal and psychological ones, which depend on the conditions characterizing the situation at hand and determine which mechanism will be used (*Réger & Loose, 2006; Tougas, Rinfret, Beaton & De la Sablonnière, 2005*). Regardless what the case might be, both mechanisms will lead to a state of disengagement (*Major, et al. 1998*) and a concomitant denial (*sec. 5.1.3*) of the need for change.

5.3.2 The concept of disidentification

Steele (1992) developed the theory of disidentification, in his effort to explain the difference between African-American and White students in US regarding their school progress. Continuous exposure to stereotypes made the former disassociate school achievements from self-esteem, in order to proactively protect it. The main logic is that they demystify the pursuit of high scoring for avoiding, in case of low performance, stereotype confirmation (*Steele, 1997*), something which apparently will not happen with white students. After the publication of this research the concept of disidentification has gained wide support in the literature (*McInerney & Van Etten, 2001:251*). In a more general view, stigmatized people will disidentify themselves with challenging domains (*Aronson, Cohen, & Nail, 1999:142*) and any feedback related to them (*Major & Schmader, 1998:236*), in order to avert stereotypes' confirmation and protect their self-esteem. Instead, consistent with *Steele's (1988:181)* self-affirmation theory, individuals maintain their overall self-integrity by affirming their self through a different resource. For instance, African-American males who neglect the discrepancy of low scoring, given the score-driven education system (*Goldstein, 2004*), focus on other areas, from which they retrieve esteem (*Graham, Taylor & Hudley,*

1998). In this sense, disidentification provides a logical basis for rationalizing the coexistence of high self-esteem and poor performance.

The concept of disidentification can be transferred into the business world. It has been suggested that business failure is linked with social stigma and embarrassment for entrepreneurs (*Martin, 2006*), which, as *Landier (2005)* claims, influences various entrepreneurial activities and decisions as well. In addition, it is believed that people generally avoid failures in order to protect their self-esteem (*Crocker & Park, 2011:309*), and, therefore, it could be argued that in the light of a business failure, leaders will take decisions with the aim of avoiding any stigma and embarrassment associated with their self. Indeed, if the case of flying away and leaving the company is excluded, executives seem to have two available responses when failure is evident. On the one hand they could try to fight the problem, which, given that the logic responsible for its development is inadequate to solve it (*Sterling, 2007:64*), implies change of the current way of thinking about as well as practicing management (*potential blame on current interpretation*). On the other hand, they could try to disengage from any imminent failure (*Semadeni, Cannella, Fraser & Lee, 2008*), which indicates that leaders do potentially detach the self from a challenging domain in order to protect their self-esteem and avoid a subsequent attribution of the failure stigma (*Martin, 2006*).

Detachment as described above, though, could reflect either a case of disidentification or its temporary version, called devaluation, which is still an esteem-protective mechanism against threatening information, but mainly refers to situational responses regarding particular incidences (*Aronson & McGlone, 2009:164*). This temporary mechanism of disengagement can be considered a case of resistance and within the scope of this work is treated as an aspect of the defence mechanism of trivialization (*sec. 7.1*). However, given its situational nature, devaluation requires a sense of reflective thinking, and, therefore, it is impossible to be treated as a habitual response that is produced in an automatic way (*Bargh & Chartrand, 1999*). Consequently, cessation of any effort for improvement at the unconscious stage occurs when the intermediate level of situational disengagement leads, or more accurately has already led, to a chronic state of disidentification (*Morgan, & Mehta, 2004; Nussbaum & Steele, 2007*). According to *Major & Schmader (1998:221)* a state of disidentification is developed through continuous exposure to the same problem and disengagement

with the domain in question. In other words, disidentification requires previous experiences with a challenging domain, and probably is not a situational response, but it is part of an individual's self-definition (*Major, et al. 1998*).

It could be argued that chronic detachment with a problematic domain will not prevent self-esteem from being damaged, since the failure will occur and the stigma will be attributed to the leader. Yet, according to disidentification theory, leaders will focus and probably escalate their efforts on the basis of an affirmation resource, which on the one hand has been the reason for their past success (*Nadler, 2007*), and on the other hand will work as an "alibi" for the potential failure.

Steel (1988) supported that the affirmation resource could be either relevant or irrelevant to the cause of the initial discrepancy, and it will be used for affirmation as long as it is central to the self. On the contrary, *Aronson, Blanton & Cooper (1995)* demonstrated that individuals will avoid any affirmation resource relevant to the discrepancy, even if it is central to the self, and will select those which justify and "substitute" the initial maladaptive behaviour. The latter argument seems logical since a relevant resource could create controversies with individuals' choice in the first place, by making salient the violated rules that caused the discrepancy (*Blanton, Cooper, Slkurnik & Aronson, 1997*). Therefore, transferring these into the business world, leaders will not solely focus on domains which could affirm their self-esteem. On the contrary, it is possible to see leaders focusing on domains irrelevant, yet supplementary, to the discrepancy, which simultaneously serve the company as well as justify the apathy towards and ostensibly substitute the inconsistency indicated by the change advocate. Finally it should be noted that the defensive response at this stage is not caused by the use of an affirmation resource per se. Besides, self-affirmation can minimize the need to use ego-defensive biases and, thus, promote adaptive responses (cf. *Sherman & Cohen, 2006*). Instead, it is the use of the affirmation resource as a supplement to the process of disengagement.

5.3.3 The discounting hypothesis

Similar logic to the disidentification theory underlies the discounting hypothesis, according to which individuals reduce the importance and accuracy of negative feedback (*McInerney & Van Etten, 2001:253*). The logic of the theory is that stigmatized individuals protect their self-esteem (*Major, Kaiser & McCoy, 2003*), by

attributing the blame not to their inability to meet a specific case's requirements (*potential blame on current interpretation*), but to assessors' predisposition, driven by their prejudices, to provide negative feedback (*Crocker & Major, 1989*). No matter if there is or there is not a case of unfair assessment, when negative feedback could be attributed to prejudices, stigmatized individuals, in their vast majority, will choose to do so (*Crocker, Voelkl, Testa & Major, 1991*). In this sense, the assessed apart from being a victim of potential prejudices becomes, at the same time, the immolator, as he/she is prejudiced against the assessor, and due to this state of mutual prejudices, the understanding of the incoming information is unlikely to reflect the reality (*Morton, 2009:239*).

Competition plays a determinant role in developing prejudices in the business world and, thereby, provides the basis for the discounting hypothesis to occur. This statement derives from *Sherif, Harvey, White, Hood & Sherif's (1954/1961)* research, which demonstrates that groups operating within a competitive environment develop not only hostility towards one another but also phenomena of mutual prejudice. While their work dates back approximately 55 years, their experiment is widely accepted by recent researchers and their book has been characterized as "*the most significant book in social psychology*" (*Fine, 2004*). An important exception to this general acceptance is *Tyerman & Spencer's (1983)* critique, who supported that if group members have several years of previous acquaintance, competition is not enough to develop phenomena of hostility and prejudice. Their argument seems logical, if someone takes into consideration the quite young age of their experiment's subjects, who additionally were familiar with each other for years and probably were driven by youth's innocence. However, in a system, like the contemporary one, which leads individuals to isolation (*Guntrip, 1968:355*) with a clear trend to protect their self against any competitor (*Catalino, 2010:55*), hostility and prejudice seem to find a fertile ground for their establishment (*i.e Bracher, 2012*). On this basis, the current work accepts *Sherif's, et al. (1954/1961)* conclusions and suggests that competition is indeed the basis for discounting hypothesis to take place.

In addition, given this harsh and competitive reality in the world, *Sassenberg, Moskowitz, Jacoby & Hansen's (2007)* work, which expands *Sherif's, et al. (1954/1961)* initial conclusions, acquires additional credit. They claimed that even if specific competitors do not participate in the development of the competitive climate,

individuals will still develop prejudiced and hostile behaviours as long as they had previously faced competitive conditions. Therefore, it is not only that everyday life will promote what *Pinel (1999)* called stigma awareness, which enhances an individual's ability to perceive him/herself as a target of discrimination. But the competitive reality develops a respective competitive mind-set (*Sassenberg, et al. 2007*) which leads the individual to a state in which perceiving hostility and prejudices against him/herself becomes an irrational obsession. Thus, it is possible to see individuals favouring those causes of a given effect, which could be explained by the competitive and prejudiced reality, and, thereby, consistent with the discounting hypothesis, protect their self-esteem (*Major & Schmader, 1998*).

Competitive conditions, which create a fertile ground for developing similar irrational obsessions, can be traced in the world of economics and business as well. While competitiveness could have been a journey towards excellence (*Zahra, 1999*), reality is quite different, since it became an obsession responsible for many of society's problems (*Krugman, 1994*). At a business level competitiveness developed into a war among firms, to such an extent that some authors argue that success depends on the wise transfer of Sun Tzu's military theories into business (*e.g. Krause, 2005:1; McNeilly, 1996:4*). Within this competitive environment, it is logical, yet arguably not acceptable, to treat direct or indirect competitors with hostility. However, the business world "went a step further". According to *Porter's (1980/2008)* five forces (5F), which is a popular tool for analysing businesses' environments and formulating strategies (*Clark, 1997; Stahl and Grigsby, 1997:145*), companies should compete not only with competitors but also with suppliers and customers (*Ghoshal, 2005*). Obviously, this approach promotes hostility and prejudice between partners, which instead of cooperating and striving for a common goal, they prefer competing and placing their selves in a win-lose type of partnership, with devastating results for their performance (*Deming & Neave, 1990*).

Apparently, the previous discussion corresponds to the highly relevant research area of inter-organizational trust and its positive contribution to the inter-firm exchange process performance (*see Zaheer, McEvily & Perrone, 1998*). From a complementary point of view, it can be argued that lack of trust plays an important role on how leaders treat feedback. For instance, research has shown that individuals deny compelling evidence that issue an urgent appeal for action regarding human suffering, due to

mistrust of the organizations that initiate the campaigns (*Seu, 2010;2011*). Of course, understanding the phenomenon of trust within the business context is not that simple, since inter-organizational trust is a multi-dimensional phenomenon that dynamically changes as the relationship between the partners-firms unfolds (*Huang & Wilkinson, 2013*). Nevertheless, apart from this relational type of trust, which is unique for every case-partner, there is also a dispositional type which refers to a relatively fixed among various cases characteristic-belief of the individual that others can, or cannot, be trusted (*Gulati & Sytch, 2008*). More precisely, if the individual has a competitive mind-set and believes that he/she is in a competitive situation, lack of trust will be manifested (*i.e. Heneman & Greenberger, 2002:23*) and change will not occur.

Concluding from the previous, it is suggested that the competitive climate among stakeholders paves the path for discounting hypothesis to occur. Hilton (*1995*) argues that individuals filter utterances on the basis of their perception of the speaker. Similarly, hostility and prejudices among stakeholders affect interpretations during business communication. These feelings will be triggered and probably enhanced, in the light of negative feedback by a stakeholder, regardless of the existence of previous conflicts and negative experiences with the stakeholder him/herself (*Sassenberg, et al. 2007*). On the basis of this continuous pressure of competition, which as noted above formulates a competitive mind-set, disengagement through the phenomenon of the discounting hypothesis abolishes its situational characteristics (*Caudroit, Stephan, Brewer & Le Scanff, 2010*), and takes on more chronic features (*Major, et al. 1998*). That is to say, building imaginary enemies and discounting negative feedback, by attributing the blame to the general unfair system and the hostile predispositions of various stakeholders (*Major, 1994:335*), becomes an integrated trait to a leader's self-organization (*Heneman & Greenberger, 2002:23*). Thus, driven by their competitive mind-set, executives will constantly tend to discount any negative yet worthy feedback, which consequently will lead to denial of any need to learn and change.

5.4 Towards the next phase: An emotional experience of surprise

From a cognitive as well as emotional point of view, any evidence discrepant compared to schematic representations of reality, will lead to an emotional experience (*George & Jones, 2001; Mandler, 1990:13, A; Mendonca, 2011:49; Stein & Trabasso, 1991:52*). More, precisely, when a leader faces unexpected evidence and realizes a potential

blame of the existing interpretation, he/she is expected to experience the emotion, or more accurately pre-emotion (*Lazarus, 1991a:83*), of surprise which is independent from further appraisals (*Roseman, Antoniou & Jose, 1996*). Note that the main logic behind this transitional stage, and its consequences (*fig.15*), is consistent with the cognitive-psychoevolutionary model of surprise (*Meyer, Reisenzein, & Schützwohl, 1997; Reisenzein, 1996*).

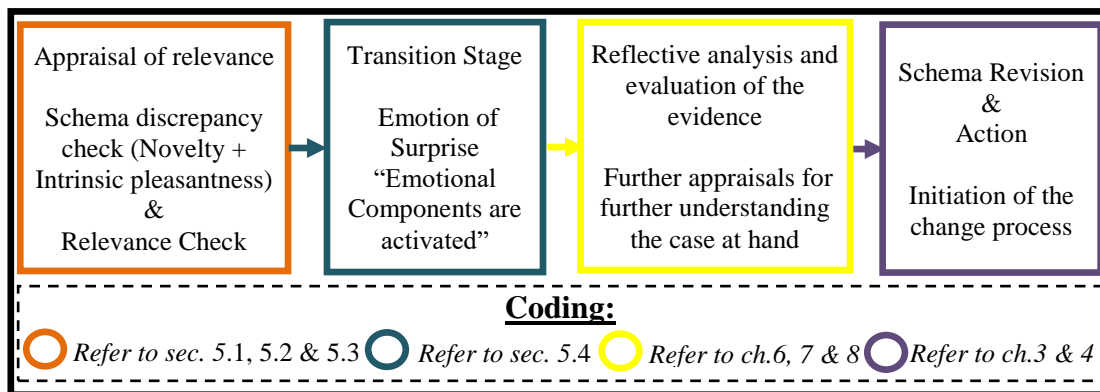


Figure 15. The steps after the appraisal of relevance (*Based on Reisenzein, 2000*)

The cognitive appraisals that led to the emotion of surprise will affect the rest of the emotional components. The unconscious processes will be reflected in the conscious mind through the subjective feeling of surprise, and, thereby, the individual will become aware of the discrepancy (*Reisenzein, 2000*). This transition to consciousness will be accompanied by a physiological arousal, which is an expected reaction to the cognitive discrepancy (*Cappella & Greene, 1982; Christenfeld & Mandler, 2013:191; Croyle & Cooper, 1983; MacDowell & Mandler, 1989*), and could also be expressed by a facial expression of surprise (*Batty, & Taylor, 2003*). This synchronization will lead to a complete emotion of surprise which in its turn will function as an interruption mechanism that will capture individual conscious attention to the discrepant evidence (*Meyer, Niepel, Rudolph, & Schützwohl, 1991*).

In essence, the ongoing cognitive processing will be interrupted (*Reisenzein, 2000; Simon, 1967*), and a state of action readiness (*Frijda, 1988*) that will create a desire to further analyse and thereby understand the discrepant evidence will be developed (*Brocas & Carrillo, 2003:211; George & Jones, 2001; Roseman, 2013; Warneryd, 2008:55*). Furthermore, through the component of arousal, the “heat” to unfreeze the necessary motives for change is provided (*Tobey & Manning, 2009*), while at the same time the individual “gets cognitively prepared” to face the change by accommodating

his/her schemas (*Mandler, 1990:15*). In such cases, the intuitive processes go into the back and the reflective mind, which initially operates in a lower level (*Kahneman, 2011:24*), comes in the cognitive foreground (*Croskerry, 2009*). The expected outcome from engaging in this state of higher cognitive ability and conscious engagement (*Louis & Sutton, 1991*) is to construct a new mental model of hypothetical understanding regarding what is necessary to be done in order to face the unknown-novel crisis at hand (*Evans, 2003*). That is, though a set of additional cognitive appraisals (*analysed in the following chapters*) action able to deal with the new evidence (*Sternberg, Roediger & Halpern., 2007:12*) and the concomitant cognitive dissonance produced by the discrepancy (*George and Jones, 2001*) should be triggered.

5.5 Compiling the theory: A model of schematic reaction to discrepancies

The previous sections described the process according to which leaders appraise discrepant evidence at an unconscious level. In particular, the appraisal of novelty, accompanied by the one of intrinsic pleasantness, will orient leaders' attention (*Smith & Ellsworth, 1985*) towards the discrepancy (*sec. 5.1 & 4.2*). These appraisals though, are insufficient to initiate the necessary emotional process (*Campos, et al. 2010; Moors, 2007*) since it is only when the received information is evaluated as significant to someone's well-being (*sec. 5.3*) that the emotion of surprise is experienced. Three general alternatives have been formulated for leaders who face discrepant evidence (*fig.16*). That is, leaders could:

1. Have no interpretation of the case. Novel situation is faced.
2. Realize potential blame of their old interpretation. No resistance is expressed.
3. Insist on their old interpretation. Resistance is expressed.

The first two paths indicate cases where individuals could realise the discrepancy without any symptoms of resistance while the third one indicates a case where resistance to the identification of the discrepancy could arise and the change advocate's intervention is necessary. No matter which path the individual may follow, and of course given the successful intervention of the change advocate in case of resistance, the outcome will be for the individual to proceed to the second phase of the change process. More precisely, a perceived discrepancy (*Jett & George, 2003*), or a novel incoming message (*Croskerry, 2009*), will transfer the individual from an unconscious

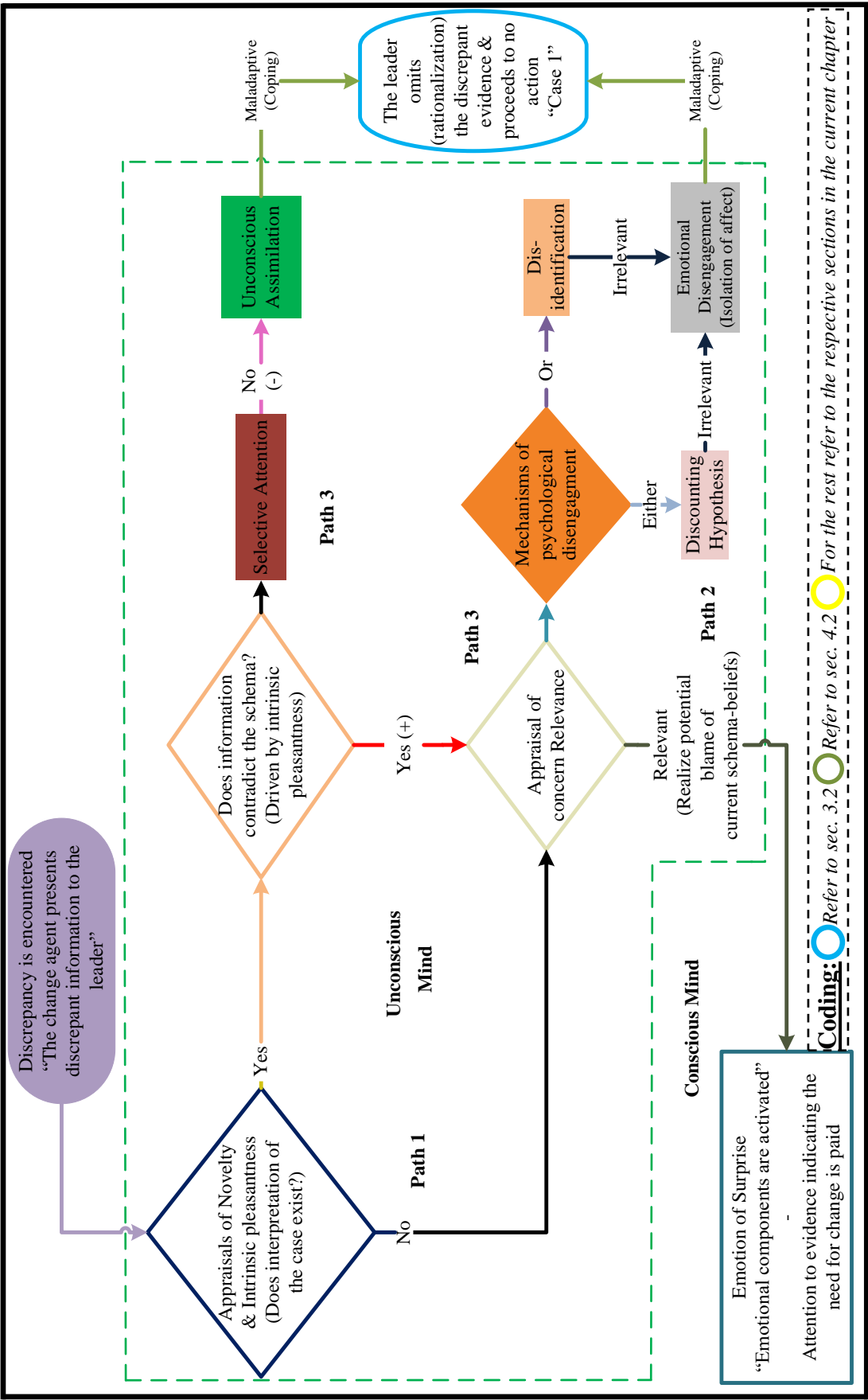


Figure 16. Schematic reaction to discrepancies

state to a cognitively conscious one, in which individuals evaluate the evidence from a reflective perspective (*sec. 5.4*). At this stage, the current chapter comes to an end, since its aim to analyse the process which leads to the identification of the compelling evidence, has been met. The rest of this work aims to conceptualize the process according to which the individual develops a new understanding that will lead to action. This new understanding will be constructed based on schematic and reflective cognitions, the analysis of which is the main research focus of the following chapter.

6 The change process in the reflective state

The realization of the discrepancy transfers the individual from an unconscious to a conscious state. In this chapter, the qualities of cognitive appraisals in the later reflective system are explicated with the aim of understanding why leaders that face the same evidence could be led to different responses regarding the need for change. The concepts of subjectivity and defensive response will be elaborated from a psychological as well as a philosophical perspective. Based on these theoretical foundations, the chapter will conclude with the illustration of an emotional change model and a discussion on the underlying mechanisms that could cause maladaptive responses to the need indicated by the received evidence.

6.1 The cognitive component as a duality in the reflective state

6.1.1 Introduction to the concept of duality

It has been argued that the emotion of surprise, which is triggered in the unconscious and automatic state, will lead the individual into a reflective and conscious mode of thinking (*q.v. ch.5*). While in principle this transition seems to be valid the either/or distinction doesn't explain the complexity of human mind (*see Carruthers, 2012*). As *Lieberman, et al. (2002)* suggests, based on their conceptualisation of the cognitive duality, when the reflective mind (*C-system*) gets engaged the non-reflective mind (*X-system*) continues to operate. From a consistent perspective, *Evans (2008)* challenges the traditional distinction between system 1 and system 2 thinking, by supporting that it is possible to have a system 2 which involves not only conscious, slow and controlled cognitions, but also, fast, uncontrolled and unconscious ones. It seems, therefore, that whilst the individual has become consciously aware of the potentially discrepant evidence, unconscious and intuitive cognitions affect the change process in this latter reflective state (*i.e. Marcel, 1983*). This idea will be elaborated in the following sections. However, before proceeding in the analysis of how the two systems dynamically interact, it is essential to present them "in isolation" and explain how they are conceptualized within the scope of this work.

Researchers in dual theories have suggested various characteristics according to which the cognitive processes could be categorized (*see Evans, 2008 for a review*). Recent

scientific evidence on change readiness, though, advocates a main distinction between cognitive and affective evaluations (Rafferty, Jimmieson & Armenakis, 2013; Stevens, 2013). Similarly, LeDoux (2007) argues that emotional-affective cognitions, which belong to intuitive-experiential thinking (Evans, 2008; Epstein, 1994), are different from various cognitive functions that are well developed in humans. These emotional cognitions evaluate the evidence in reference to someone's well-being (Cunningham & Kirkland, 2012; LeDoux, 2007) which, not only results in some sort of feeling (*the classic notion of appraisal*) but also determines if the evaluated reality will be accepted or not (Frijda, 2007b).

	Ego-driven mind	Gnosis-driven mind	Reference
Change	Affective evaluations	Cognitive Interpretations	Gibson (1995); Rafferty, et al. (2013); Stevens (2013)
Appraisal theories of	Affective appraisal	Cognitive evaluation	Castelfranchi (2000)
	Associative	Rule - Based	Smith & Neumann, (2005)
	Emotional processing	Cognitive Processing	LeDoux (2007)
	Intuitive Appraisal	Deliberate appraisal	Arnold (1960)
	Schematic system	Propositional system	Schaefer, et al. (2003)
	Appraisal	Inferential strategies	Lazarus & Smith (1988)
	Implications for someone's well-being	Non- evaluative and fact oriented	Kuppens & Van Mechelen (2007)
	Reinstatement	Computation	Clore & Ortony (2000)
Dual- Process theories	Hot	Cold	Abelson (1963)
	Experiential	Rational	Epstein (1994)
	System 1	System 2	Stanovich (1999)
	Type 1	Type 2	Evans (2008)
	X-system	C-system	Lieberman, et al. (2002)
	Intuitive systems	Reflective architecture	Carruthers (2009)
	Accosiative	Propositional	Gawronski & Bodenhausen (2007)
	Hot "Go" system	Cool "Know" system	Metcalf & Mischel (1999)
Philosophy	Protagorian Subjectivity	Platonic Objectivity	Versenyi (1962); Goldstein & Alexander (2006)
	Current perspective to which individual is beholden	Considers additional perspectives	Nagel (1989); Nietzsche (in Anderson, 1998)

Table 15. Various considerations of the duality

Following the duality which is recommended by change management theorists, it is argued that an individual, during the reflective state, not only cognitively interprets the evidence for change but also emotionally evaluates it in the light of personal concerns (*Gibson, 1995*). This proposed cognitive-affective duality is conceptualized in two systems, the ego-driven (*hot*) and the gnosis-driven (*cold*), the properties of which are demonstrated in *table 15*. Generally speaking, the systems consist of cognitive and affective processes which continually interact (*Goel & Dolan, 2003*) and jointly determine behaviours (*Pessoa, 2008*) as well as create mental-models of conscious understanding (*Christensen & Olson, 2002*). Consequently, any action that an individual may undertake, like accept or decline the proposed evidence for change, depends on the mental model that will be triggered (*Senge, 2006:8*) as a result of their function (*analysed throughout the chapter*). It should be noted, though, that the suggested categorization is by no means restrictive since there are important differences between concepts that belong in the same column (*cf. Evans, 2008*). Thus, each box should not be considered an absolute representation of the general system to which it belongs, but as a building block for its development.

6.1.2 The ego-driven system

The ego-driven mind comprises the implicit and personal schematic beliefs (*Lazarus, 1991a:140; Lazarus & Smith, 1988: General Knowledge*), or else the unconscious mental models which are developed mainly through past experiences (*Fiske & Linville, 1980*) and influence someone's understanding about how the world works (*Senge, 2006:8*). In addition, it includes superordinate goals (*ego-ideals: refer to sec 4.3*), which along with the previous construct a global meaning system (*enduring knowledge*) that guides schematic interpretations as well as associations and, thereby, formulates understanding of a particular encounter (*Park, 2010; Park, & Folkman, 1997; Cervone, 2004*). Similarly, individuals in organizations, like leaders, hold schematic beliefs and mental constructs in order to make sense of their organizational life (*see Harris, 1994*). Based on them, they generate, automatically and fast, the stream of consciousness (*Lieberman, et al. 2002: X-system*) in the context of their organizational environment, and proceed to actions that have been developed after years of accumulated learning and experience (*Lieberman, 2003*).

The ego-driven system precedes the gnosis-driven one, since it consists of rapid and automatic cognitions and takes place in the intuitive-experiential mind (*Evans, 2008;*

Epstein, 1994). Its processes refer to hot-affective cognitions (Abelson, 1963), the core of which is the automatic (Lazarus, 1991b; Moors, 2010), schematic (Leventhal & Scherer, 1987) or else intuitive (Arnold, 1960:182) appraisals. They are necessarily evoked and evaluate the evidence based on past experiences, current goals and unconscious schematic expectations (Ellsworth, 2013; Smith & Neumann, 2005) that belong to someone's global meaning system, as described above. Consistent with the classic notion of appraisals (*i.e.* Moors, Ellsworth, Scherer, & Frijda, 2013), their role is to evaluate the implications of an encounter for someone's well-being by considering any kind of concerns and, thereby, to produce an emotional experience. Following this logic, the word "ego" aims on the one hand to conceptualize the close relation between "hot" cognitions and the self-ego (Chandler, & Birch, 2010:695), on the other hand to separate these cognitions from other 'colder' ones, like various attributional and inferential strategies (Lazarus & Smith, 1988; Lazarus, 2001:57), which within the scope of this work will be included in the gnosis-driven system.

If an individual could appraise evidence only with ego-driven processes, the outcomes would be extremely susceptible to ego-centric subjectivity (*see subsequent sections for in depth analysis*). Apparently, ego-driven cognitions are consistent with the classic notion of appraisal and, therefore, are based on subjective, instead of objective, evaluations of the evidence at hand (Kuppens & Van Mechelen, 2007; Scherer, 1999a). More precisely, appraisals draw upon various types of information, like personal goals, that lie in the "repository" of the unconscious (Borgh, & Borndollor, 1996) global meaning system in order to subjectively evaluate specific stimuli (Moors, 2013b), and, thereby, construct the personal and unique reality for any individual (Ben-Ze'Ev, 2003:155). Thus, consistent with the concept that "the man is the measure of all things" (*Protagoras famous doctrine in Versenyi, 1962*), it could be argued that the close relationship between the self-ego and the appraisals make the outcomes of this system subjective in their very essence.

6.1.3 The gnosis-driven system

Awareness of (*emotional*) mental processes (Scherer, 2004) along with any contextual knowledge (Lazarus & Smith, 1988), or else understanding, of a particular encounter at a given moment are realized in the conscious gnosis-driven system (*consciousness*: Schneider & Velmans, 2008). From a traditional theoretical perspective, it could be argued that various construal related cognitions, such as inferential strategies and

attributions, evaluate the received evidence by drawing upon the personal global meaning system (Lazarus & Smith, 1988: *General Knowledge*; Park, 2010; Park, & Folkman, 1997) and formulate what individuals understand (Lazarus, 1991b). This seems to suggest that inferential strategies and attributions function similarly to appraisals (*sec. 6.1.2*), which explains why various authors have treated them as either being the same thing or the cold counterparts of appraisals (Lazarus, 1991a; Lazarus & Smith, 1988). Within the scope of this work, a distinction between the processes of the two systems will be accepted without though falling into the trap of the illusionary competition between hot/heart and cold/mind reasoning (Phelps, Lempert & Sokol-Hessner, 2014).

In essence, the cognitive processes of the gnosis-driven system allow human beings to reflect on the stream of consciousness that has already been produced by the ego-driven system (Lieberman, et al. 2002: *non-reflective consciousness*) and, thus, offer the basis for a “re-evaluation” of the evidence (Lieberman, et al. 2002: *reflective consciousness*). In contrast to Lazarus & Smith (1988; but see Smith, Haynes, Lazarus & Pope, 1993), this revaluation defers from previous ego-driven appraisals by coming later and consistent with the main characteristics of system 2 thinking, is reflective, conscious and deliberate (Evans, 2008). That is, cognitions in the gnosis-driven system are able to place the individual in a relative distance, compared to intuitive appraisals, from the object-ego and its activities (Sartre’s notion of reflection in Morris, 1985) and, thereby, review the emotional outcomes of the ego-driven system (*refer to sec. 6.1.2*) in a thoughtful and strategic way (Evans, 2006b). On this basis, it can be argued that reflective cognitions refer to a “cold” processing of the already generated emotion that aims, mainly yet not exclusively (*analysed below*), to regulate and control (Smith & Neumann, 2005) rather than produce the emotional experience (Schaefer, et al. 2003).

Let’s for a moment leave aside the notion of reflection and consider an imaginary scenario in which a situation is appraised solely with gnosis-driven processes that operate autonomously and without the support or contribution of the ego-driven system. It is argued that in such imaginary cases, the absolute objectivity as this is reflected in nature’s unchanging true “forms” (Plato’s “external” conception of truth in Goldstein & Alexander, 2006) would have been approximated or even realized (*if it exists at all*). This is because, this kind of cognition is mainly, yet not exclusively (*see below*), driven by the evidence (Kuppens & Van Mechelen, 2007) that describes the

objective reality which is distanced, or more precisely separated, from the individual (Ben-Ze'Ev, 2003:155). Yet, this is probably impossible, as the ego even in the conscious and reflective state affects understanding and continues to ascribe meaning to the world (Husserl in Ratcliffe, 2002). As Lazarus (1991b) supports, attributions and inferential strategies which are responsible for producing “cold” contextual knowledge include to a limited extent the self, which, as it will be analysed in the following section, is mainly due to the fact that gnosis-driven evaluations are intertwined with ego-driven appraisals (Lazarus, 1991a; Storbeck & Clore, 2007).

6.2 The emotional change process & the logic of cognitive duality

6.2.1 The change process: A set of intuitive & reflective cognitions

Before proceeding to explain the logic of duality and how resistance could occur, it is essential to set the overall context by briefly discussing the intuitive appraisals and reflective evaluations that constitute the change process (*table 16*). The process is underpinned by the main principle of appraisal theories that wants emotions to be differentiated based on a set of criteria-variables according to which individuals evaluate a case (*i.e. Frijda, 1987; Lazarus, 1991a; Scherer, 2001; Roseman, 2013; Smith & Ellsworth, 1985*). While from an emotional point of view there is a fair agreement among appraisal theorists on the number and variety of these criteria (Moors, *et al.* 2013), the current research aims to approach the process from the perspective of change management (*i.e. Liu & Perrewé, 2005*), which makes the choice of the appropriate dimensions special. In order to face this issue, the researcher followed a logic suitable for interdisciplinary analysis (*sec. 8.2*) and developed a change process that combines literature from the fields of management and appraisal theories of emotion. In general, the change process follows Scherer's (2001) four main phases of appraisal, with two significant modifications, one of which were stimulated by Lazarus's (1991a) work and refers to changes in the last variable, while the other refers to the inclusion of a regulatory mechanism (*first column table 16*).

Before the process starts, the leader is initially either experiencing another emotion, or lies in a default mental/feeling mode, which is then interrupted by an appraised discrepancy (Scherer & Ellsworth, 2013). In particular, the leader through a set of preconscious appraisals (*q.v. ch.5*) will evaluate the relevance of the evidence for

Phases <i>(Scherer, 2001)</i>	Steps of leaders’ Change Process	Intuitive appraisal (Ego-driven)	Reflective evaluation (Gnosis-driven)
Relevance detection <i>(Chapter 5)</i>	Identify (Sense) the discrepancy <i>(Cowan, 1986)</i>	Novelty <i>(Scherer, 2001)</i>	No reflective evaluation
		Intrinsic pleasantness <i>(Scherer, 2001)</i>	No reflective evaluation
		Concern relevance <i>(Scherer, 2001)</i>	No reflective evaluation
Regulatory Mechanism <i>(Section 6.3)</i>		Implications for ego-commitments <i>(Based on Lazarus, 1991a; 2006:92; Scherer, 2001:98)</i>	
Implication assessment <i>(Chapter 7)</i>	Problem detection <i>(Cowan, 1986; Klein, et al. 2005)</i>	Ego-commitment congruency <i>(Lazarus, 1991a; Scherer, 2001)</i>	Business goal congruency <i>(Lazarus, 1991a; Scherer, 2001)</i>
	Evaluate urgency rate <i>(Kotter, 1996;2008)</i>	Effort considerations <i>(Ortony, et al. 1988; Smith & Ellsworth, 1985)</i>	Urgency check <i>(Scherer, 2001)</i>
	Responsibility diagnosis <i>(Kiecolt, 1994; Wood & Winston, 2005)</i>	Blame & credit <i>(Lazarus, 1991a)</i>	Attribution of responsibility <i>(Smith & Ellsworth, 1985; Scherer, 2001)</i>
Coping potential <i>(Chapter 8)</i>	Assess situational control <i>(Bandura & Wood, 1989; Thomas, et al. 1993)</i>	Anchored controllability <i>(Gratch & Marsella 2004; Lisetti & Gmytrasiewicz, 2002)</i>	Control <i>(Scherer, 2001)</i>
	Evaluate change efficacy <i>(Weiner, 2009)</i>	Power concerns <i>(Scherer, 2001; Roseman, 1991;1996)</i>	Manageability <i>(Frijda, 1987)</i>
Decision making – Coping <i>(sec. 6.2.3)</i>	Decision to change <i>(Lazarus, 1991a:112)</i>	Accumulated unconscious core affect <i>(Shuman et al., 2013)</i>	Conceptualized conscious understanding <i>(Park, 2010)</i>

Table 16. Steps & appraisals for change

his/her well-being and thereby will transcend to a conscious and phenomenally reflective, state (*sec. 6.1*). This phase corresponds to the identification-sense of the discrepant evidence that indicates the need for change (*Cowan, 1986*). Afterwards, in the higher cognitive state the leader evaluates the implications of the evidence from a personal (*intuitive appraisal*) as well as systemic-business (*reflective evaluation*) perspective by classifying the discrepancy to a problem or not a problem (*Cowan, 1986; Klein, et al. 2005*) and thereby verifying the already sensed discrepancy (*Reisenzein, 2000*). If the verification is successful, the leader will realize the need for change (*Kilmann & Mitroff, 1979: felt need*), and, consequently, will proceed to the following phases which refer to the aspect of commitment to action (*sec. 3.2.2*).

As far as commitment is concerned, the evaluations of urgency rate (*Kotter, 1996:2008*) and causal responsibility diagnosis (*Kiecolt, 1994; Wood & Winston, 2005*) are central. In particular, they complement the classification of the discrepancy (*implication assessment: Scherer, 2001*) by consolidating a sense of personal-leader responsibility to act “now”. In addition, the appraisal of coping potential (*Lazarus, 1991a*) seems to be a determinant of change initiatives, since it provides the essential sense of perceived capability to apply change in a given situation (*i.e. Armenakis, et al. 1993; Vardaman, Amis, Dyson, Wright & Van de Graaff Randolph, 2012:837; but see Walinga, 2008 & ch.8*). More precisely, following *Scherer’s (2001)* distinction it is argued that a leader will evaluate whether control over the case can be exerted (*i.e. Bandura & Wood, 1989; Thomas, Clark & Gioia, 1993*) as well as the organization’s and his/her own efficacy to apply change effectively (*i.e. Haleblan & Rajagopalan, 2005; Weiner, 2009*). Finally, the outcomes of the previous steps will determine leaders’ response to the case at hand (*Lazarus, 1991a:112*) and could result in either taking or avoiding action.

The previous paragraph described briefly (*for an in depth analysis see ch.7 & 8*) a dynamic emotional change process (*Scherer, 2009b*), throughout which a leader can experience various emotional episodes and feelings (*Ellsworth & Scherer, 2003:575*). Immediately, justifiable questions are raised regarding the order in which these appraisals occur. Following *Scherer’s (1999b)* argument about cognitive economy, it is suggested that the phases of the appraisals (*first column*) will follow a typical order with the output of each phase constituting the input of the following one. For example, it seems pointless to determine the capability of taking action if the existence of the business problem has not been realized in first place. On the other hand, the order of the appraisals

within the phases themselves (*what Scherer, 2001 calls checks*) is not stable, but depends on the cognitive demands and general conditions that dominate the relationship between agent and environment (*consistent with Marsella & Gratch, 2009; see also Marinier, Laird & Lewis, 2009*). Nevertheless, despite this dynamic conception of order, the need for simplifying the analysis led the researcher to follow the order presented in table 16. On this basis, the rest of this section will shed additional light on the change process by discussing the interdependence between intuitive appraisals (*ego-driven system*) and reflective evaluations (*gnosis-driven system*).

6.2.2 On the dynamic interdependency of the two systems

In general, it is suggested that intuitive appraisals and reflective evaluations are used in order to assign personal meaning to a specific event (*Park, 2010*). Specifically, the two systems receive information, evaluate them, by drawing upon individuals' general unconscious (*Hamilton, 2006:241*) knowledge system (*Cervone, 2004; Cervone, et al., 2008*), and determine values in reference to various appraisal dimensions (*Moors & Scherer, 2013:136*). They do so by loading on different, yet highly interdependent paths, regarding on the one hand the level of reflection and consciousness, and on the other hand "proximity" to the self (*Lazarus, 1991a:147*). In this sense, affective (*hot*) and cognitive (*cold*) evaluations are not operating in an either/or basis (*as they are presented above*) but run simultaneously and dynamically contribute, in their own special way, to a common process (*Storbeck & Clore, 2007*). That is, to formulate an emotional response able to deal with the requirements of the faced case (*Folkman & Lazarus, 1985*), and, thereby, secure survival and prosperity for the involved entity (*Damasio, 2010*).

Everything starts (*t1*) when the controlled processes, which have been triggered by the pre-emotion of surprise (*q.v. ch.5*), create an imagistic representation of the act of changing (*Carruthers, 2009:118*), the evaluation of which constitutes the necessary motivational goal so that the unconscious thought can be engaged (*Bos, Dijksterhuis & Baaren, 2008*). This suggests that any information relevant to the envisaged act of changing will be initially (*Louis & Sutton, 1991*) evaluated (*fig.17: orange continuous line*), in reference to a specific appraisal dimension (*t2*), from an ego-driven perspective (*Ben-Ze'Ev, 2003:155*). During this evaluation the gnosis-driven system (*fig.17: orange dashed line*) operates in a lower level (*Kahneman, 2011:24*) and, thus, creates an illusion of conscious will (*see Wegner, 2004 and commentaries for a comprehensive discussion*

on the illusion of conscious will). That is, the individual consciously experiences the occurrence of the reflective evaluation (*tip of the iceberg*), when it is the corresponding (table 16) to this evaluation unconscious (*below waterline*) appraisal that actually governs information processing (consistent with Velmans', 2003; 2014 symbolism of the iceberg). In essence, by reacting to excessive changes in the organismic subsystems that get synchronized (Grandjean, Sander & Scherer, 2008; Sander, Grandjean & Scherer, 2005), the unconscious mind produces an emotional experience that communicates to consciousness (fig.17: green arrows) interesting realizations and adaptive behaviours regarding a social encounter (Rauterberg, 2010).

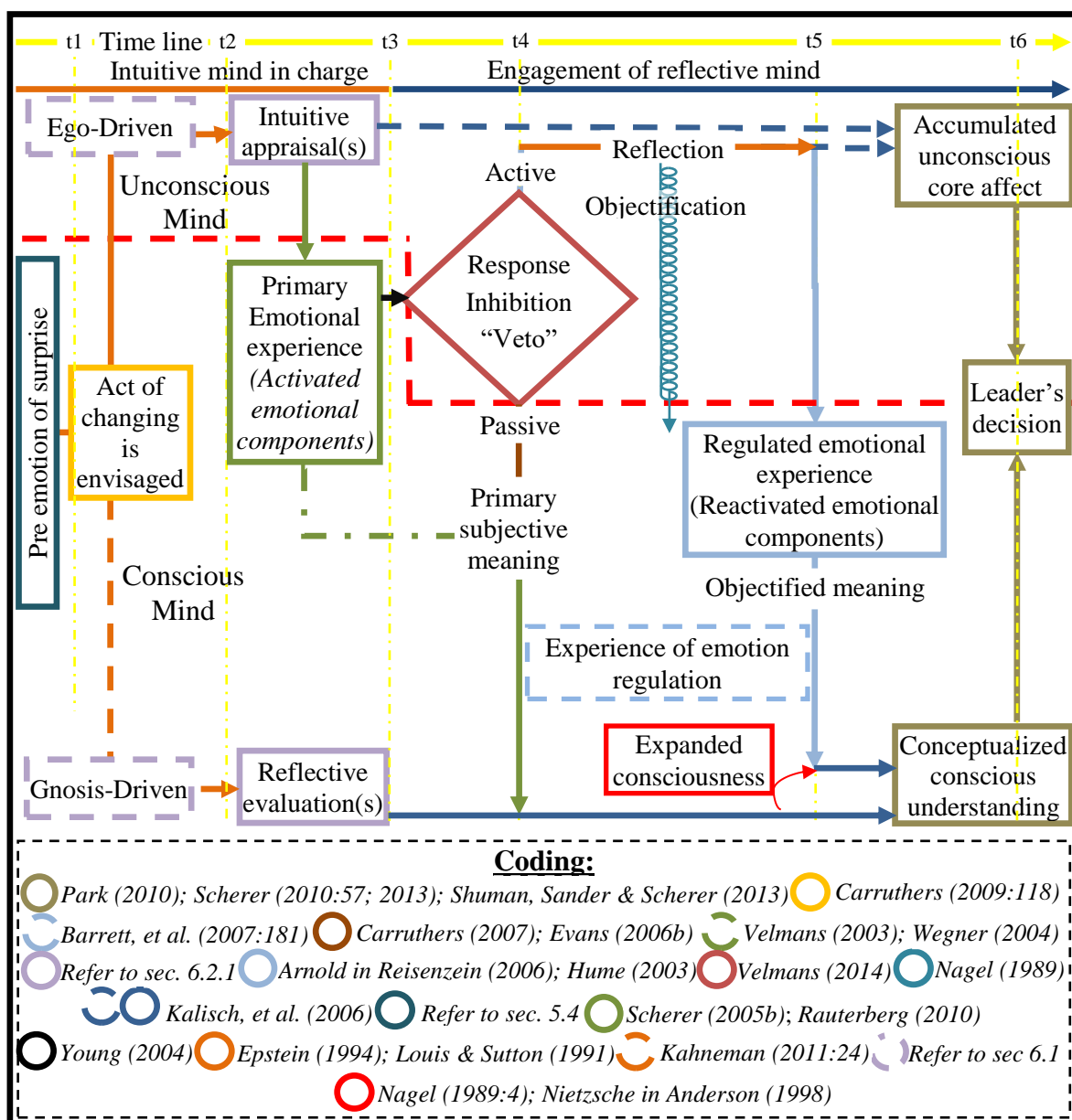


Figure 17. The interdependence of the two systems

The gnosis-driven mind plays almost no role on the evaluation of the evidence at this very first stage, apart from appropriating the results (t_3) of the preconscious appraisals, as these are projected into consciousness (*fig.17: green dashed line*) through the subjective feeling of emotion (Scherer, 2005b; Mandler, 1997). Whether cognition in the reflective state is autonomous or dependent on the unconscious ego-driven appraisals (Leventhal & Scherer, 1987; Magda Arnold in Reisenzein, 2006) will be discussed in the following section. Be that as it may, once (t_3+) the lateral gnosis-driven processes are actually engaged (*fig.17: blue continuous lines*), the unconscious ones are attenuated (*fig.17: blue dashed line*) and a process of re-evaluation (t_4) takes place. This re-evaluation considers normative beliefs and applies reasoning (Carruthers, 2009; 2012; Lieberman, et al. 2002) in order to control the emotional experience by regulating (*fig.17: azure dashed lines*) the unconsciously produced inferences (Barrett, Ochsner, & Gross, 2007:181; Kalisch, Wiech, Critchley & Dolan, 2006).

Drawing on Gawronski & Bodenhausen's (2007) notion of validative propositional reasoning, it is argued that the regulative impact of the reflective mind can take two main forms. On the one hand, it affirms the intuitive and affective inferences of the ego-driven mind, and conceptualizes evaluative judgements based on their impact (Gawronski & Bodenhausen, 2007). In this case, regulative processes simply apply normative logic and reasoning in order to control the "animal response" that has been produced by the affective mind (Damasio, 2010), without though changing the core of the appraised meaning that comes with it. As dual-process theorists suggest while conscious, or phenomenally conscious (Carruthers, 2007), regulations could occur, most of the times the reflective mind does nothing more than translating the unconscious dictations into conscious responses (Evans, 2006b). On the other hand, when, and if, the reflective and "self" free, not in an absolute sense but compared to the ego-driven one (Lazarus, 1991b), system is "actively" engaged the produced affective inferences are getting rejected (Gawronski & Bodenhausen, 2007). In such cases, individuals reflect on their initial ego-driven view (Lieberman, et al. 2002) of an encounter and build a more detached understanding (*fig.17: red lines*) of expanded consciousness (Nagel, 1989:4; Nietzsche in Anderson, 1998).

6.2.3 The unconscious affective mind & the notion of reflection

Dual-process theorists suggest that the intuitive-unconscious processes impact on someone's actions profoundly enough to constitute any perception of conscious control largely an illusion (*Evans, 2010; see also Carruthers, 2007; 2009*). From a consistent point of view, *Scherer (2005b)* argued that emotional processes occur mainly unconsciously and, therefore, while individuals get to know some of the emotional outcomes, they remain barely aware of what produced these outcomes. As it has already been mentioned, the messenger of this described "transaction" is the subjective feeling that reflects to consciousness any changes in the emotional components, including the appraisal itself (*Scherer, 2004*). Consequently, what individuals consciously think is only phenomenally distinct (*Duncan & Barrett, 2007*) from what feelings "carry" from the unconscious to consciousness (*Kuppens, 2010; Storbeck & Clore, 2007*). In other words, thoughts are nothing more than simple one-dimensional reflections of complicated and multi-dimensional affects that are produced in a higher mental level (*Friedrich Nietzsche in Thiele, 1990:55; Rauterberg, 2010*).

Someone would expect that once the individual engages in reflection, controlled and conscious cognitions intervene and regulate the initial emotional response (*Smith & Neumann, 2005*), so that adaptive appraisal results, in reference to the objective reality at hand, can be generated (*Scherer, 2011*). Regulation and control of emotional responses, though, is not an outcome of solely conscious cognitions, but unconscious processes contribute as well (*Gross, 2001*). More precisely, if emotion regulation is perceived as a continuous effort of appraisal refinement that will change the quality and/or intensity of the emotional experience (*Lazarus, 1991; Scherer, 2011*), then the inclusion of intuitive appraisals for the elicitation of a counter emotional impulse is necessary (*Hume, 2003:295*). As Magda Arnold suggested, reflective processes are able to generate emotions, but they do so only by bringing into operation intuitive appraisals (*in Reisenzein, 2006; Leventhal & Scherer, 1987*) and, thereby, involving the self-"ego" in the interpretive process (*Smith, et al. 1993*).

Such a perspective advances a rather intriguing theorization, according to which the impositions of passion over reason are equally true even when self-management enables conscious modes to actively (*fig.17*) intervene (*Deecke, 2012*) and regulate the initial impulses (*Hume, 2003*). However, in such cases conscious understanding is projected on a reflective basis (*fig.17: azure lines*), in the sense that the intuitive

appraisal is (re)engaged by a reflective evaluation (*inspired by Arnold, in Reisenzein, 2006*), a process which is able to generate more controlled emotional experiences and, thus, targeted actions in order to deal with the issue at hand (*i.e. Aristotle 1998:32 on controlled anger*). Ultimately, it can be argued that the self is not a mere slave of intuitive affective impulses (*Frijda, 2010b*), but can exert control, at least indirectly, over them and their concomitant actions by deploying reflective reasoning and conscious deliberation (*see Damasio, 2012:332; Scherer, 2011*). The outcome of such successful reflective regulations will be an emotional impulse (*t5*) that is able to re-determine someone's understanding and, consequently, re-define the course of action to be taken (*Hume, 2003:295*).

6.2.4 Leaders' motivation & the decision for (in)action

The described dynamic process should lead to what *Faulkner (2001)* described as the essential characteristic of any crisis situation; that is a point when (*t6*) decisive change to tackle the issue is taking place (*fig.17: golden box*). Whether such a point will come or not depends on how the component of motivation (*Scherer, 2005*) will be "carved" by the evaluation of the case in reference to the imaginary act of changing (*Rangel, et al. 2008*). In this way, a set of action tendencies will be formulated (*Frijda, et al. 1989*) and, thus, the appetitive-attractive or repulsive intention as regards to the change issue at hand is established (*Castelfranch, 2000*). More precisely, each evaluative dimension comprises a micro valence (*Scherer, 2010; 2013*) that is integrated in a holistic core affect (*Russell, 2003*) that informs through conscious as well as unconscious paths (*Duncan & Barrett, 2007*) the necessary decision to be taken (*macro valence: Shuman, et al. 2013*).

In the unconscious intuitive level, the valences formulate an overall action tendency (*fig.17: accumulated unconscious core affect*) to either enhance (*appetitive*) or decrease (*aversive*) interaction with the issue at stake (*motivational system: Lang & Bradley, 2010; Frijda, 2010a*). This action tendency is an affective impulse that carries information regarding the value of the situation-crisis under evaluation and how the individual feels about it (*Clore & Huntsinger, 2007*). Such information plays an important role on the decision to change because it establishes the acceptability or non-acceptability (*Frijda, 2007b*) of the need to take action as this is described by the received evidence. Along with the affective impulse though, the subjective evaluations in the preciosncous mind (*Scherer, 1999a; 2005b; Siemer, Mauss, & Gross, 2007*) will

also generate an emotional experience (*this can also be a mix of different emotions*), which is an important aspect of the decision process as well (*core affect in the foreground: Duncan & Barrett, 2007*).

More precisely, the emotional experiences project to consciousness (*fig.17: conceptualized conscious understanding*) a unique understanding-meaning (*Frijda, 1988*) of the relation between the individual and the crisis at hand. *Lazarus (1991a)* calls this relational understanding “*core relational themes*”. Respectively, within the context of this work they will be treated as “core relational change themes” in order to reflect the nature of the model. By projecting this subjective in nature and unconsciously formulated meaning (*Kuppens, 2010; Moors, 2013b*), feelings colour someone’s conscious understanding (*Ewert, 1970*), and, thereby, construct the unique for every individual subjective apperception of reality (*see Rasmussen, 1998*). In this way, they bring to consciousness our intuitive wants and desires, and, thereby, determine our actions (*Arnold, 1971*). Ultimately, it is only when the impulsive action tendencies are accompanied by a conscious understanding that points towards a deliberate decision (*information that is offered through the conscious core affect Duncan & Barrett, 2007*) to act (*inspired by Arnold, 1960:245; 1971*) that change will occur. Yet, as it will be discussed below, neither this synchronization nor the process itself is that straightforward.

6.3 The regulatory mechanism: Implications for the ego-identity

6.3.1 Response inhibition & the process of objectification

It has been argued that while cognition and affect cannot actually be separated (*Storbeck & Clore, 2007*), with emotion always dictating the way to reason, alternative conceptions can exist and in plenty of cases individuals do follow them (*Frijda, 2010b*). In general, it seems that there are two main processes responsible for the production of such reflective actions. On the one hand, it is the ability of human beings to control the emotional impulses through reflective reasoning and conscious deliberation (*Damasio, 2012:332*). On the other hand, it is the generation of a counter emotional impulse that is able to re-determine someone’s understanding and, consequently, re-define the course of action to be taken (*Hume, 2003*). The latter argument presupposes the engagement of the affective ego-driven mind in the process of reflection, which leads to the suggestion that along with any cognitive control strategies, a determinant

unconscious “approval” for the inhibition of the initial emotional response is also necessary (*Velmans, 2014; also consistent with Metcalfe & Mischel, 1999*).

More precisely, *Velmans (2014)* claims that a conscious “veto” to unconsciously produced intentions (*i.e. Libet, 1985*) has its own unconscious antecedents (*fig.17: red rhombus*). Indeed, according to recent evidence, response inhibition, which includes the phenomenon of emotion regulation, is caused by unconscious processes (*i.e. Hughes, Velmans & De Fockert, 2009*). The only requirement for the unconscious mind to determine whether or not a “veto” should be put, is a conscious experience (*Velmans, 2014*) that can be genuinely novel and needs not to have been associated with specific responses in a particular context in the past (*Hepler & Albarracin, 2013*). In essence, the conscious mind re-broadcasts the act of changing along with the already generated response, which both, then, become inputs to a new cycle of unconscious evaluations (*Carruthers, 2009*). In this way, the conscious experience gives a kind of feedback to its own unconscious triggering mechanisms (*fig.17: black small arrow*) and, thereby, influences, rather indirectly, subsequent thoughts and actions to be taken in response to a faced situation (*Young, 2004*).

Following the distinction between adaptive and maladaptive implicit emotion regulation (*sec. 4.3*), it is argued that the re-engaged processes of the unconscious ego-driven mind can produce two different outcomes. In the adaptive scenario, alternative conceptions can be produced through objectification (*Nagel, 1989:4*), a gradual process which the more it occurs the more the initial ego-attached perspectives tend to become ego-free (*objectification: fig.17*) and align with the objective reality of the case at hand. As a result, the individual can enter to a potentially perpetual process of reflection, in which he/she reevaluates the evidence in the light of the previously produced conception(s) (*Nagel, 1989:4*) and, thereby, enhances the formulated internal truth by taking into consideration additional perspectives of the same case (*Nietzsche in Anderson, 1998*). At the same time, though, it is also possible that ego-threatened commitments impact on the appraisal process (*Kumar, 2012; Rhine & Severance, 1970*) and prevent the process of objectification and thus, reflection from taking place. That is, defensive motivation can inhibit the reflective processes from either engaging at all or, if engaged, overriding/suppressing (*Carruthers, 2009; Stanovich, 2009*) the initial ego-attached understanding and its ego-centric response.

6.3.2 The two ways towards an ego-driven defensive response

Following the arguments in the previous section, it is possible to conceive two distinct, yet similar in their fundamentals, ways according to which defensive responses can be manifested. On the one hand, when the reflective mind does not engage, individuals have no conscious realization of having conducted a defensive appraisal(s) and, thus, become victims of an illusion that wants the formulated perception to be the one and the only objective representation of the faced case (*Pyszczynski, & Greenberg, 1987:302*). This notion of illusionary reality suggests a kind of deception that is based on the notion of cognitive duality and the dominance of the ego-driven intuitive mind (*Carruthers, 2007; Evans, 2010*), as well as on the drawn distinction between ego-commitments, which are the ones that entail the necessary “defensive” motivational impulses (*sec. 6.2.3*), and other goals (*Crown & Rosse, 1995*). Specifically, given that someone’s ego-identity springs from the unconscious (*Schwartz, 2001*), leaders could be deceived by consciously realizing the goal of pursuing business improvement, while their cognition and behaviour is actually motivated (*unconscious goal pursuit: Custers & Aarts, 2010*) by the unconscious desire to preserve their ego “integrity” (*Von Hippel & Trivers, 2011; i.e. Bargh, Raymond, Pryor & Strack, 1995*). In such cases, then, the individual remains unaware of the fact that his/her emotional experience is driven by unconscious defensive appraisals (*Andersen, 1995*), while at the same time the formulated conscious understanding is underlain by a feeling (*see Duncan & Barret, 2007*) of coherence and logic (*see Pronin, Gilovich, & Ross, 2004*).

On the other hand, there can be leaders who objectify their view (*Nagel, 1989*) and, thereby, manage to formulate a relatively more rational and, thus, non-defensive meaning of the case at hand (*Lazarus, 1995b: double logic*). The realization of such a meaning does not ensure any conscious awareness of the core processes behind the defensive appraisals, which, similar to the scenario described above, remain in the unconscious (*Lazarus, 1991b*). However, as long as a second contradictory meaning exists, leaders will not become victims of an illusionary objectivity (*Pyszczynski, & Greenberg, 1987:302*), but will experience a conflict between a relatively subjective (*hot*) and a more objective (*cold*) perception (*Nagel, 1989:89*) of the very same change issue (*Fiol & O'Connor, 2002*). In essence, the initial emotional response that serves exclusively the needs of the ego-commitments (*defensive*) conflicts with a counter emotional response (*non-defensive*) that serves the needs of the overall system (*Berrios,*

Totterdell & Kellett, 2014). That is, a conflictual distinction between ego-commitments and business goals (Crown & Rosse, 1995), which is conceptualized as a repulsion for what benefits and/or attraction for what harms the overall system (*inspired by Castelfranchi, 2000:97*), is made.

How the individual will respond when hot-defensive (*first-order*) and cold-rational (*second-order*) appraisals collide, has rarely been discussed by appraisal theorists (*de Sousa, 2013*). However, researchers from other disciplines have been based on dual theories, and more precisely on the notion of conflict between the two systems (*see Lieberman, et al. 2002; Stanovich, 2009*), in order to explain human behaviour in various contexts. For instance, *Moore & Loewenstein (2004)* utilized the logic that wants the actions of an individual to depend on which system is in dominance (*Martin, Sirakaya-Turn & Woodside, 2011:54*), in order to explain why someone's self-interests (*automatic processing*) take precedence over ethical responsibilities for the common benefit (*thoughtful processing*). Commencing from a similar conflictual logic, *Wang & Murnighan (2011)* go a step further to suggest that both greedy (*aka exclusively ego-driven*) and socially moral (*aka towards gnosis-driven*) behaviours emanate from the unconscious mind, with the former simply having "*a split second edge*" over the latter. Here it is argued that any conflict of this kind is underlain by the common phenomenon of contradictory motivational valences (*fig.17: blue dashed lines in core affect*), which occurs in emotional experiences with mixed feelings (*see Shuman, et al. 2013*) that serve opposing goals (*Berrios, et al. 2014*). For example, the leader can enter into an ambivalent state, in which the understanding of the need to proceed with the transformational change is accompanied by a feeling that the loss of ego and status from such a change is too much to deal with (*Piderit, 2000*). Ultimately, despite any differences with the extreme case of illusionary objectivity (*Pyszczynski, & Greenberg, 1987:302*), the problem, as the current research considers it, is again the unconscious impact of ego-driven defensive mechanisms on the change process.

6.3.3 Defence in the reflective state: Rationalizing the discrepancy

Consistent with the notion of cognitive duality that characterizes the reflective state, *Madrigal (2008)* has argued that in case of discrepant evidence (*negative valence*), the expected negative emotion (*Roseman, et al. 1996; Roseman, 2013: motive inconsistency*) is better predicted by appraisals (*table 16: ego-driven appraisals*) rather than attributions (*table 16: gnosis-driven evaluations*). In this work's terms, the

inconsistency and its subsequent ego-threat enhance, through stressful emotionality, the hot ego-driven system (*Mischel & Shoda, 1999:204*), and, thereby, make its intuitive appraisals “potentially” incompatible with what the relatively objective and ego-free gnosis-driven system (*sec. 6.1.3*) would have appraised if it operated in isolation (*conflict between hot and cold systems: see Fiol, & O'Connor, 2002*). That is, the increased personal involvement doesn’t deteriorate attribution’s ability to predict emotion, but rather enhances intuitive appraisals which in their turn dominate the process and drive its outcome (*Leon & Hernandez, 1998*). In this sense, the response of the leader to the threatening evidence depends on how the mechanism of implicit emotion regulation (*adaptively or maladaptively*) will respond to the increased stress (*Arnold, 1970:170; Parrott, 1995*) that is, nevertheless, necessary for change to occur (*i.e. Losch & Cacioppo, 1990 on attitude change*).

In particular, when regulation is adaptive leaders face the increased stressful emotionality that enhanced the hot ego-driven system (*Mischel & Shoda, 1999:204*), without repressing the necessary emotional vigilance (*Koole, & Jostmann, 2004*) regarding the need to change, and by balancing between ego-commitments and general environmental needs within which the emotional transaction occurs (*Lazarus, 1990:6*). In this way, the individual who might, or might not, formulate an initial intuitive ego-centric evaluation, can engage in the process of objectification (*Nagel, 1989*) and eventually realize the need to act (*see Scherer, 2011 on rationality*). On the other hand, maladaptive regulation drives leaders to avoid their negatively charged emotional experiences, by engaging in the process of motivational reasoning (*see the impact of ego-commitments on the appraisal process in sec 4.2*), in which egocentric evaluations (*Parrott, 1995*) try to defend irrationally the honour of the attacked ego-commitments (*Westen, Blagov, Harenski, Kilts & Hamann, 2006*).

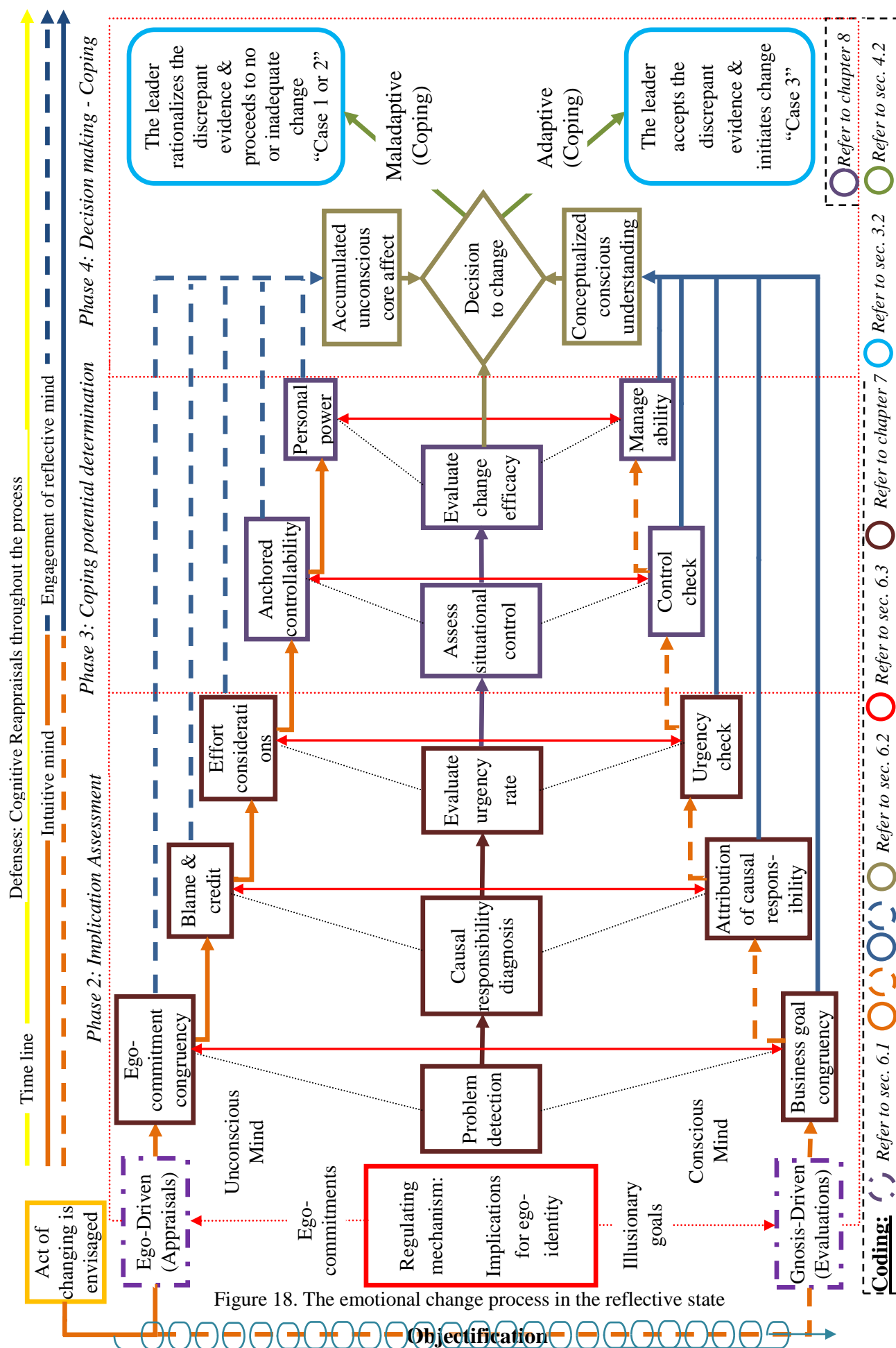
Expressed in terms of appraisal, leaders who respond defensively during the reflective state utilize the regulatory mechanism of cognitive change (*Gross & Barrett, 2011*). Unlike selective attention (*automatic state: sec. 5.1.3*), defences that are based on this paradigm reinterpret a case’s meaning so that the ongoing emotional response can be regulated (*spectrum in Ochsner & Gross, 2005*) in favour of the attacked ego (*Westen, et al. 2006*). That is, leaders rationalize the discrepancy (*sec. 3.2.2*) by interpreting it as being in favour of their schemas-mental models (*Fiske & Taylor, 1991:150*). Indeed, schemas (*schematic ego-driven processes: see Berzonsky in White & Jones, 1996*) can

regulate leaders' interpretation processes and thereby, given the subjective reality in which leaders operate (*Chaffee, 1985: interpretive strategy*), play a significant role in their interpretation of and the concomitant response to the compelling evidence (*Daft & Weick, 1984*). For instance, *Barr & Huff (1997)* demonstrated that an event, which objectively had impact for every organization in a specific industry, was interpreted differently and, therefore, didn't lead to action in every case.

6.4 Compiling the theory: The emotional change process

The analysis conducted in the previous chapters enables the creation of an accumulative model that describes the change process in the reflective state (*fig.18*). In particular, the analysis demonstrated that cognition breaks down into two highly interrelated parts (*sec. 6.1.1*). On the one hand, there is an ego-driven system (*upper level in fig.18*) which is associated with hot-emotional cognitions and evaluates the evidence from a personal and subjective perspective. Given its characteristics, it was suggested that the basis of this system is what appraisal theorists of emotion call intuitive appraisals (*sec. 6.1.2*). On the other hand, there is a gnosis-driven system (*lower level in fig.18*) which consists of cold cognitions that provide the basis so that the (re)evaluation of the evidence can occur. This system consists of various inferential strategies which have been encompassed under the umbrella of reflective evaluations and are mainly responsible for regulating rather than generating the emotional experience (*sec. 6.1.3*).

The two systems are highly interdependent. Initially, the ego-driven system produces an intuitive appraisal, the outcome of which is projected through the subjective feeling to consciousness. There, it is processed by the gnosis-driven system in the sense that the formulated conscious experience is provided back to the unconscious mind, which, in its turn, will determine whether to revise the initial subjective appraisal or directly arrogate it and constitute it an objective reality (*sec. 6.2.2*). This is a potentially perpetual process, in which the more it occurs the more the initial ego-driven processes tends to detach from the ego and, thus, approaches the objective reality (*sec. 6.2.3*), as this could have been appraised by an organism with "only" the gnosis-driven system in operation (*sec. 6.1.3*). Also, this notion of duality occurs for a set of dimensions, the compilation of which was formulated based on the necessary steps for a leader to



analyse the evidence that indicates the need for change (*middle row in fig.18*) and resulted in the emotional change process of this work (*sec. 6.2.1*). Each of these dimensions produces a micro valence which is accumulated into an unconscious core affect and along with the cognitive understanding that is projected in consciousness, defines leaders' final decision regarding change (*sec. 6.2.4*).

The last two sections of this chapter attempted to explain the phenomenon of ego-driven defensiveness based on the concept of duality and the subsequent notion of reflection (*sec. 6.3.1*). In a general sense, defensiveness occurs when inconsistent, or else threatening for the ego, evidence produces stress that is confronted through the mechanism of maladaptive implicit emotion regulation. This type of regulation, which is synonymous to the defence mechanisms, results in driving appraisals to produce distorted evaluations and, thereby, maladaptive responses that aim to defend the honours of leaders' ego (*sec. 6.3.3*). In such cases, leaders can either appraise a single illusory objective meaning or formulate two contradictory meanings, one hot and defensive and another cold and objectified, of the case (*sec. 6.3.2*).

With these in mind, the current chapter comes to an end, since its aim, that is to analyse the change process in the reflective state, has been met. The following two chapters will provide a detailed map of the process so that the change advocate can understand in which step leaders defensively appraise the evidence. This is expected to facilitate the development of a toolkit that will enable change advocates to face cases of resistance to the evidence that indicate the need for action.

7 Towards the acceptance of the urgent need for change

The first phase of the change process in the reflective state (*q.v. ch.8 for the second phase*) encompasses a set of steps that, according to the modified TTM model (*fig.2*), will enable the individual to establish the need for change and formulate the initial intentions for action (*contemplation*). By following the logic of cognitive duality and the concept of emotion regulation, the current chapter sets out to analyse the appraisals (*intuitive & reflective*) that take place in these steps as well as identify and discuss the respective ego-defences that could be triggered and cease the change process. As a result, a map of the core feelings, behaviours and cognitive understandings that leaders could experience and consciously express throughout the phase will be developed.

7.1 Problem detection: Identifying the need for change

7.1.1 Detecting the crisis & its importance

The first step for realizing that a system experiences a crisis and that the need for taking action is evident, is reached in the unconscious level, during which leaders sense the triggering event of an existing or imminent change (*Keown-McMullan, 1997*). As it has already been demonstrated (*ch.5*), the triggering event is understood as a discrepancy (*Armenakis & Harris, 2002; Armenakis, Harris & Feild, 2000*) that elicits the basic emotion of surprise. Once this essential feeling of surprise is experienced (*Faulkner, 2001; Hermann, 1972:13; Reilly, 1987*), the conscious and phenomenally reflective mode of analysis is set in motion (*ch.6*). At this state, leaders establish, or have to establish, the perception of a crisis through a set of evaluations of the already sensed discrepancy regarding its “seriousness” for the involved unit (*distinction between discrepancy detection and further evaluations inspired by Billings, Milburn & Schaalman, 1980*).

The first of the necessary appraisals refers to the acceptance of the problem-crisis. In his problem-recognition model *Cowan (1986)* suggests that realizing the existence of a problem requires one to classify the sensed discrepancy as such (*fig.18, Process step: problem detection*). Indeed, a situation can be called a crisis, if, and only if, the triggering event constitutes a threat to the survival and the important goals of the involved unit (*Faulkner, 2001; Hermann, 1972:13; Keown-McMullan, 1997*). It is

argued, therefore, that leaders who sense a discrepancy precociously, have to reflectively verify its impact (*Reisenzein, 2000*), by evaluating the level of congruency (*Lazarus, 1991a:150; Scherer, 2001:97*) between the discrepancy at hand and already established business goals (*fig.18, Gnosis-driven evaluation: Business goal congruency*). In this way, they develop the necessary awareness regarding the problematic status of the situation (*Majone, 1980:9*) and, consequently, set a crucial steppingstone towards the initiation of the necessary cognitive reframing (*Klein, 2005*) and, thereby, problem-solving process (*Smith, 1989*).

7.1.2 Ego-involvement & trivialization of the discrepancy

The realization of the problem-crisis, though, is not that straightforward. More precisely, along with their impact on business goals, faced discrepancies will have implications for leader's exclusively personal motives and concerns (*Liu & Perrewé, 2005*). On this basis, it is suggested that the whole phase of problem detection will be driven by an intuitive appraisal (*logic of duality: sec. 6.2*) that evaluates the type of leader's ego involvement with the evidence at hand (*Lazarus, 1991a:150*). As it has already been demonstrated (*sec. 6.3*), leaders hold various personal goals (*Crown & Rosse, 1995*), or else ego-commitments, which, similar to business goals, can be either promoted or inhibited by the faced situation (*self-discrepancy theory: Higgins, 1987*). In this sense, the intuitive appraisal at this stage is, also, an evaluation of the case's congruency with goals that are held by the individual (*Schere, 2001; Lazarus, 1991a*). However, instead of having exclusively business-“cold” goals at stake, the individual engages personal-“hot” motives as well (*term from Roseman, 2013*), which within the scope of this work refer to personal ego-commitments (*fig.18, Ego-driven appraisal: Ego-commitment congruency*) that reflect a self-ideal (*q.v. sec. 4.3*).

As long as a relationship of threat is appraised (*negative valence: Higgins, 1987*), a motivational impulse to respond defensively by trivializing the importance (*Simon, Greenberg & Brehm, 1995*) of the discrepant evidence that indicate a need for change will be formulated (*defence mechanism: Trivialization*). In particular, a discrepancy that challenges a fundamental aspect of the ego-self (*i.e. attitude, belief, act, behaviour cognition; Starzyk, Fabrigar & Soryal, Fanning, 2009*), will indicate the existence of underlying psychological costs of changing (*Zell, 2003*). Thereby, leaders will be driven to protect the held “cognition” by responding with trivialization (*Draycott, & Dabbs, 1998*) to the cognitive dissonance that has already been produced (*sec. 5.4*) due

to the experienced discrepancy (*George and Jones, 2001*)⁷. In this way, the sensed discrepancy remains in existence but its importance, as an indicator of a need for personal and business change is minimized (*Baumeister, Dale & Sommer, 1998*). Also, this could be accompanied by a simultaneous devaluation of the domain that the discrepancy refers to (*Nussbaum & Steele, 2007; sec. 5.3.2*). Consequently, then, the adopted response is by no means adaptive, since in crisis situations the magnitude of the problem is high (*Reilly, 1987*), and, thus, a large scale change is required (*sec. 3.2*).

7.1.3 Mapping problem detection: The three potential outcomes

Following the previous analysis, it is suggested that the classification of a discrepancy could produce three potential outcomes (*table 17*). On the one hand, there is the adaptive scenario according to which leaders realize the crisis and its negative impact on held goals (*Faulkner, 2001*). It should be clarified that a precise understanding of the problem and the way it should be solved follows after the realization of the problematic situation (*Majone, 1980:9*) and, therefore, does not interest the current research. Nevertheless, a mere realization of the incongruence between stimulus-event and goals, personal or business ones, is achieved at this stage, which automatically prepares leaders for a large scale action (*Bartunek & Moch, 1987*). In addition, this realization is expected to be accompanied by negative emotions-feelings, which are brought on due to the incongruent nature of the evidence (*terminology adopted by Lazarus, 1991a*).

On the other hand, there is the maladaptive scenario which is separated into two distinct cases. This distinction is legitimized as long as the variation regarding the level of goal obstruction that is caused by the case at hand (*Scherer, 2001:96*), is considered along with the way cognitive psychologists have treated trivialization. In particular, theorists like *Starzyk, Fabrigar, Soryal & Fanning (2009)* propose that cognitive change and trivialization could occur simultaneously. From this perspective, it is possible to have leaders that minimize the magnitude of the discrepant evidence, which, in its turn, will

⁷ Theorists have used the aspect of trivialization mainly, if not exclusively, within the concept of cognitive dissonance. In their papers they discuss specific types of change, such as attitude, belief and sometimes cognitive. This terminology is not followed here, since the current research considers trivialization from a wider perspective, which derives from the fact that change refers to an alteration of current mental representations and business practices.

drive them to accept the need for minor adjustments in cognitive schemas (Johnson, 1988). As a result, schemas and mental models (Senge, 2006) are not challenged and change adequately enough (George & Jones, 2001) to trigger a transformation, and, hence, smaller scale changes will take place (Sheldon, 1980). In contrast, theorists like Joule & Martinie (2008) treat trivialization and cognitive change as alternate modes of dissonance reduction (Simon, et al. 1995). The researcher adapts this latter view to the logic of this work, and recommends the case of extreme assimilation (Piaget, 1954; sec. 3.2.3), in which the already sensed discrepancy is trivialized to such an extent that a realization of no need for change is reached.

Appraisals (Defence)		Problem / Business goal incongruence	Slight Problem / Business goal incongruence (Slight Trivialization)	Not a Problem / Business goal congruence (Trivialization)
Cognitive Understanding		Realize the problematic situation and its magnitude.	Realize a need for smaller, compared to the one the evidence suggest, change.	Realize no need for change. Progress toward the achievement of goals.
Coping behaviour – instances		Prepare for a large scale action.	Minimize the importance and impact of the discrepant information and prepare for minor adjustments.	Deny completely the existence of a problematic situation and prepare for no change.
Feelings	Promoted	Negative feelings (Guilt, Shame)		Positive feelings (Gratitude, Pride)
		Maximum intensity	Reduced intensity	
		Hope		
		Heroic, Democratic or Transcendental	Pragmatic	
Central	Central	Sadness Fear (Anxiety & Fright)		Happiness

Table 17. Map for the classification step

Regarding the emotional experience, the initial step of classification provides a crucial distinction between the two basic coping tendencies of seeking more (*positive emotion*) vs less (*negative emotions*) of the faced situation (Roseman, 2013), or else the problematic status quo. Correspondingly, the emotions of happiness (*Heading toward*

the realization of goals: Lazarus, 1991a:267) or sadness (Irrevocable loss of the current status quo: *Lazarus, 1991:248*), which are general and independent from any causal attributions, are expected to be felt at this stage (*Weiner, Russell & Lerman, 1979; Weiner, 1985*). Respectively, in case of slight trivialization, similar to the adaptive scenario, sadness is promoted (*Lazarus, 1991a*), which, nevertheless, differ in terms of intensity compared to cases of full realization of the problem (*level of obstruction Scherer; 2001:96*). While in case of extreme trivialization, leaders appraise the evidence as goal congruent (*no need for change*), and, therefore, happiness is promoted (*Lazarus, 1991a*).

In addition, apart from this basic distinction, special attention should be paid to goal incongruent cases, where fear is triggered (*Lazarus, 1991a:235*), in terms of both fright (*Physical consequences from the loss of resources*) and anxiety (*Threat to the ego-identity and uncertainty regarding the response and the future*). Essentially, the uncertainty that characterizes change initiatives (*Liu, Perrewé, 2005*) render the sense of fear and anxiety a matter of course for the individual (*Senge & Kaeufer, 2000*). How the experience of loss (*Bailey & Raelin, 2015*) as well as the uncertainty and the concomitant ego-threat, which are manifested as fear for the unknown, will be treated (*Eagle, 1999*), is going to play a determinant role on the outcome of the change process (*q.v. subsequent sections & ch.8*). Such considerations, though, exceed the step of discrepancy classification and call for additional appraisals to specify the emotional experience and the coping response to be adopted (*Moors, De Houwer, Hermans & Eelen, 2005*).

7.2 Evaluate urgency rate: Formulating the intentions for change

7.2.1 An analysis of urgency: The perspective of cognitive appraisals

The importance of urgency for change initiatives has been widely discussed in the introduction of this work (*ch.1*). In sum, a sense of urgency, which essentially is a feeling of doing something “now” in order to face hazards or turn to advantage opportunities (*Kotter, 2008:7*), is mandatory for change to occur (*Luecke, 2003*). Of course, the way urgency has been conceptualized by theorists focuses mainly, yet not exclusively, on its dissemination throughout the organization (*i.e. Kotter, 1996*). However, this work’s research interest (*sec. 1.5.2*) along with the top-down characteristic of PCs (*Mehta, 2009:66*), suggests that, before anything else, the urgency

of the case at hand has to be realized by top leadership (*fig.18, Process step: Evaluate urgency rate*). In this sense, within the scope of this section, urgency will be approached as a cognitive dimension (*Scherer, 2001:97*) based on which the evidence at hand is evaluated by leader(s) in the system (*fig.18, Gnosis-driven evaluation: Urgency check*). Through this evaluation, leaders are expected to comprehend that the problematic situation-crisis, which has already been identified (*appraisal of goal incongruence*), requires immediate attention (*Reilly, 1987*). That is, any decision, regarding the necessary adaptive response (*Scherer, 2001*), has to be taken fast, since the situation at hand is a crisis that highly threatens organization's survival (*Billings, et al. 1980; Faulkner, 2001; Hermann, 1972*).

From its “cold” perspective, urgency can be conceived as a pressure that derives from the gradually increasing costs, produced by any kind of delay in deciding to initiate the necessary revolutionary or transformational change (*Miller, 1982*). This logic of cost-benefit analysis is indeed central when it comes to develop decisiveness for change (*Weinstein, et al. 2008*). However, an exclusive consideration of numerical-rational factors is inadequate to explain leader's behaviour at this stage. As *Anderson (2003)* has elegantly demonstrated, any intentions to approach or avoid a decision are formulated based on a set of dynamically interacting rational (*cold*) and emotional (*hot*) factors (*italics reflect the terminology used in this work*). In order to conceptualize these complex foundations of urgency check (*Scherer, 2001*), the current work theorizes that an underlying appraisal of the necessary effort for responding to the need for change occurs in the cognitive background as a relatively “hot” evaluation of the case's urgency (*fig.18, Ego-driven appraisal: Effort considerations*). More precisely, the appraisal of effort considerations is a combination of *Smith & Ellsworth's (1985)* appraisal of anticipated effort and *Ortony, Clore & Collins's (1988:62)* appraisal of proximity, both of which have been associated with the appraisal of urgency (*Scherer, 1993b: table 1; 1999: table 30.1*). Their interrelation is perceived through the lens of this work's notion of cognitive duality (*sec. 6.2*) and any further details regarding their logic will be explicated throughout the following paragraphs.

In its basis urgency could also be realized as the event's temporal proximity (*Ortony, et al. 1988:62*), which in terms of effort considerations, reflects “how soon” the necessary effort (*Smith & Ellsworth, 1985*) has to be exerted (*Smith, 1995*). Despite their obvious correlation (*Scherer, 1993b*) though, proximity differs from cold urgency,

in the sense that it is susceptible to emotional impulses, which mainly come from the appraised threat (*goal incongruence*) and infuse a sense of emotional subjectivity to the appraisal (*sec. 6.3*). Respectively, cold urgency sticks to rational calculations and, therefore, represents the actual temporal closeness (*Cole, Balcetis & Dunwsning, 2013*)⁸. This difference could be responsible for the emergence of panic (*Kotter & Cohen, 2002:27*), as the threatening crisis can “*over-burn the platform*” by magnifying the subjectively appraised urgency of the case at hand (*Cole, et al. 2013*). Nevertheless, any “potential” implication from this distortion concerns subsequent steps of the change process, since, either magnified (*false*) or not (*right*), urgency (*Kotter, 2008: issue is discussed in sec. 8.3*) will be sensed. It is, therefore, left to the second aspect of the effort considerations, which refers to the level of effort required for facing the case at hand (*Smith & Ellsworth, 1985*), to determine the outcome of the change process at this stage.

7.2.2 Urgency, anticipated effort & defensive procrastination

It is proposed that through the dimension of anticipated effort (*Smith & Ellsworth, 1985*), the case at hand is evaluated along three different, yet highly interrelated, criteria, which are able to manipulate the levels of urgency. In particular:

- From a general point of view, solely the acceptance of the need for exerting effort signifies a threat to the ego (*negative valence - aversive*) and establishes the basis (*see subsequent bullets for additional requirements*) for perceiving the change process as a generally aversive task (*1st criterion*). This is partially because it vindicates the existence of the crisis (*sec. 7.1*) and, thereby, revives the ego-threat that this brought on.
- In addition, and more importantly, the acceptance of exerting effort places the leader in front of his/her primary responsibility of leading change (*Yukl, 2010*). This responsibility emanates from leaders’ crucial role during change (*Gill, 2002*) and takes the form of an obligation (*Schlenker, et al. 1994*) to lead the company

⁸ *Cole, Balcetis & Dunning (2013)* demonstrated that the actual physical distance from a threatening object could be distorted and perceived as shorter. In the current work a similar argument is made but in terms of temporal proximity. This is legitimized since proximity is treated as a general psychological construct (*Ortony, Clore, & Collins, 1988*), while also the idea is susceptible to the concept of cognitive duality which seems applicable.

towards the new by accomplishing the transformation (*Deming, 1994:116*). Acknowledging this obligation holds leaders accountable for future outcomes (*Wood & Winston, 2005*) to a relevant audience (*Schlenker, et al. 1994: accountability pyramid – answerability; see also sec. 7.3*). That is, an evaluative notion (*2nd criterion*), which indicates potential ego-threatening judgements of performance, is ascribed to the imminent change effort, and, thus, leaders may delay the change process in order to avoid any psychological harm to the ego (*Ferrari, Johnson & McCown, 1995*).

- Lastly, leaders are expected to realize that the imminent change, similar to the vast majority of transformational changes, involves huge amount of effort that needs to be exerted over a long period of time (*Eckel & Kezar, 2003:165; Harmon, 2003:214*). On the one hand, these high levels of effort enhance the aversiveness of the change process by revealing to leaders the difficulty of leading change (*Carnall, 2007:37; Yukl, 2012*). This difficulty is reflected in the literature by the recommended crucial activities that leaders have to undertake during change (*e.g. Eisenbach, Watson & Pillai, 1999*). Moreover, although the oft-quoted failure rate of 70% for change efforts has not been statistically proven, there is agreement in the change management literature that probability of failure of transformational change efforts is high (*Hughes, 2011*). On the other hand, the concept of exerting effort over a period of time suggests that, despite any small wins during the change process, transformational changes will mainly pay back in the long run (*Kotter, 1996*). According to Beer, et al. (1990) the acknowledgment of long-run payoff on leaders' behalf is a determinant for change to be successful (*3rd criterion*). However, this mind-set apparently is absent among leaders in the contemporary era (*Deming, 2000*), which led *Kotter (1995)* to claim that once the long term nature of major changes is realized urgency levels drop down.

The listed issues of effort intervene and manipulate temporal realizations through the activation of the cognitive, affective and behavioural phenomenon of procrastination (*Solomon & Rothblum, 1984*). Indeed, as long as a generally aversive task (*Wilson & Nguyen, 2012*), for which the individual will be evaluated (*Ferrari & Tice, 2000*), is expected to provide delayed rewards (*Steel, 2007*) the ground for triggering the defence mechanism of procrastination is established and, thereby, any necessary efforts towards change are delayed (*defence mechanism: Defensive procrastination*). It is worthy of

clarification that procrastination is not a well understood phenomenon the essence of which is still debatable (Steel, 2007; 2010). Despite this vagueness and the various ways that someone could follow in order to approach procrastination (e.g. Uzun, Unal, & Tokel, 2014), the researcher of this work adopts a rather unusual perspective and treats it as a defence mechanism that aims to protect the self from potentially threatening evaluations (Fee & Tangney, 2000).

As a defence mechanism, procrastination regulates the already produced stress, but it does so in favour of individuals' temporary psychological stability and at the expense of his/her long-term benefits (Sirois & Pychyl, 2013). At the same time, it distorts the perception of urgency, as it reduces individuals' ability to focus on future needs-goals (Sirois, 2014), which makes the determination, or even anticipation, of a definite future an almost impossible task (Beardsworth, 1999). Due to this cognitive malfunction, the "current self" is not informed about the need to formulate the necessary set of intentions for proceeding to a course of action that will respond adaptively to the environmental challenges (Sirois, 2004; Sommer, 2013; Sommer & Haug, 2012). In this sense, it might be useful to perceive the concept of urgency (Kotter, 2008) through Gollwitzer's (1999) theory of intentions. From this perspective, urgency can be understood as the establishment of goal intentions to face the crisis that have already been formulated (*what*) accompanied by a set of implementation intentions to act urgently whenever issues regarding this crisis are faced from now on in the future (*when*).

Specifically, the already achieved awareness of the need for change is accompanied by a general idea regarding "what" the company has to do (*aka respond to the crisis*), but clear and established intentions have not yet been formulated (Sommer & Haug, 2012). It is argued that for their formulation a sense of urgency, and the concomitant acceptance of the need to exert effort, are essential, which will be the case unless procrastination intervenes and inhibits the formulation of implementation intentions (Sommer, 2013). This will bring an end to the change process, since implementation intentions are essential for initiating difficult tasks (Gollwitzer & Brandstätter, 1997), such as transformational changes. In respect to this approach, it should be noted that some theorists could disagree with this approach (Lay & Brokenshire, 1997), since it is widely accepted that procrastination presumes an intended course of action (Steel, 2007; Klingsieck, 2013). Nevertheless, recent evidence has demonstrated that the process of formulating intentions could be susceptible to procrastination (Sirois, 2004

Sommer, 2013; Sommer & Haug, 2012), especially when it comes to decision making (*Steel, 2010*).

7.2.3 Mapping urgency rate: Accept negative emotionality & act now

The appraisals of problem detection elicit an emotional valence which encompasses action tendencies that dynamically interact with the urgency check (*refer to sec. 4.2.1*). Essentially, the valence of positive emotions (*e.g. happiness, pride gratitude*) creates the tendency to seek more (*Roseman, 2013*) from the current paradigm, and, therefore, allow the individual to relax and enjoy the illusionary success (*Scherer, 1987; Smith & Ellsworth, 1985*). In other words, if the initial appraisals promote positive emotions, urgency levels will be low (*Scherer, 2001*), and, thus, the change process will not occur (*Kotter, 1996*). On the contrary, valence of negative emotions (*e.g. guilt, shame, anger, fear*) creates the tendency to seek less (*Roseman, 2013*) of the current paradigm, and, as a result, call for immediate action that will aim to ameliorate the problematic situation (*Scherer, 1987; Smith & Ellsworth, 1985*). The core question, then, is whether these tendencies for action will be allowed to set in and impel the individual towards the next stages, or whether procrastination will suppress their emergence with the aim of protecting the honours of the ego (*Fee & Tangney, 2000*).

Leaders who allow the development of the necessary intentions of urgency and effort exertion prepare themselves for action (*Smith, 1989*). That is, they understand the need as well as feel the desire to act “now”, which is translated into a fast and alert behaviour so that the crucial issues concerning the faced crisis can be tackled (*Kotter, 2008:10*). Urgency is experienced through the elicitation of fear (*Scherer, 2001*), which allows the individual to realize the imminence of the faced threat (*Lazarus, 1991a*). If, however, procrastination is triggered, the lack of urgency will become the case, which, subsequently, will lead to the total cessation, or significant constraint, of any further decisional attention to the crisis (*Dutton & Duncan, 1987*). Note, though, that this notion of decisional attention derives from the fact that procrastination, as it was conceptualized within the scope of this work, impacts on the formulation of initial intentions (*Sommer, 2013*) to decide (*Steel, 2010*) about changing. Therefore, its function shares similar characteristics with the psychology of decisional avoidance (*Anderson, 2003*), which means that lack of awareness regarding the crisis does not occur, at least not immediately, as it might be the case with defensive denial (*Vaillant, 1992*).

Appraisals (Defence)		Goal incongruence		Goal congruence
		High Urgency – Effort	Low urgency – High Effort <i>(Defensive procrastination)</i>	Low Urgency – Effort
Cognitive Understanding		Understand that there is a need to be addressed “now”.	Still being aware of the crisis but lacking the realization of the need to act “now”.	There is no need to act; hence no urgency.
Coping behaviour – instances		Desire to move fast and win now. Alert behaviour to face the critical issue of change. (Implementation intentions)	Prefer to address other issues that emerge or already exist. (Lack of implementation intentions)	The individual relaxes and enjoys the illusionary success.
Feelings	Central	Sadness		Happiness Pride - Gratitude
		Fear (Is elicited)	Indifference	
	Promoted	Anger Shame – Guilt		

Table 18. Map for the urgency rate step

On the contrary, defensive procrastination creates discomfort to the individual (Klingsieck, 2013), since the emotional system continues, for some time, to signify (Ellsworth & Scherer, 2003) the need to take action in order to reduce the existing cognitive dissonance and, thereby, face the crisis (Elliot & Devine, 1994). However, instead of responding to this call, leaders who procrastinate (*Bliss in Ferrari, Johnson & McCown, 1995:8*) remain indifferent (*Indifference: No or minimum intention to respond to the need & initiate change*) about imitating change (*low urgency: Scherer, 2001*), while at the same time allocate their attention towards subordinate pressing concerns which take precedence over the initial core discrepancy (George & Jones, 2001). Of course, such a response can be an adaptive preparation for the forthcoming loss (*anticipatory grief: Shepherd, Wiklund & Haynie, 2009*) in which case action will be eventually taken (*adaptive*). Yet, consistent with the classic Freudian logic, it can also be said that this is a period of repressing the discrepancy and gradually forgetting

about its existence (*Elkin & Leippe, 1986*). Essentially, the leader enters into a state of apathy where, after the initial shock and stress that comes from realizing the crisis, lack of emotion and, thus, motivation (*Sperry, 2016*) for formulating a response to deal with the crisis eventually becomes the case.

7.3 Causal responsibility diagnosis: The self at the core of the problem

7.3.1 The importance of internalizing causal responsibility

The next stage of the change process refers to an evaluation (*Scherer, 2001; Smith & Ellsworth, 1985*), of who or what is responsible for the causation of the event-crisis (*fig.18, Process step: responsibility diagnosis*) that is able to determine the direction of the already generated (*sec. 7.1 & 7.2*) emotional action tendencies (*Roseman, 2013*). It is argued that in order for a problematic situation to be attended and change to occur at an individual (*Kiecolt, 1994*) and, consequently, business level (*George & Jones, 2001; Whelan –Berry, et al. 2003*), leaders have to evaluate (*fig.18, Gnosis-driven evaluation: Attribution of causal responsibility*) and acknowledge personal responsibility for the problematic performance of the organization (*Kouzes & Posner, 1993:204*). This is because, by internalizing responsibility, leaders realize that blame, in case of a problematic situation, or credit, in case of an achievement, lies within themselves (*Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986*). As a result, they will direct any action tendencies towards internal causes (*Roseman, 2013*), which, ultimately, derive from inaccurate mental models (*Senge, 2006:8*) and, thus, they are more likely to engage in reorientation of business strategy and practices (*Barker & Barr, 2002*). In addition, such an outcome seems essential for the necessary transformational change to occur (*Barr, et al. 1992*), since the issues that the current work tries to address (*sec.1.3*), fall within the spectrum of top leaders' strategic functions (*Adair, 2011:98; 165*), upon which even leaders in lower levels of the system have no or little control (*Harrington, 1995*).

While extensively discussed, responsibility seems to be an equivocal theoretical construct (*Sousa, 2009*). This complexity along with the multidimensional nature of responsibility (*Gailey & Falk, 2008*) necessitates a foreordination of its conceptualization within the scope of this work. First of all, the basis of responsibility is the dimension of causal agency (*Roseman, et al. 1996; Roseman, 2013*), which is inherent in leaders' role as key decision makers of the system (*Bennis, 2009*). Once

causal involvement is granted, responsibility is ascribed according to additional cognitive elaborations (*Frijda, 1993*). For instance, according to appraisal theorists a crucial dimension is intentionality (*i.e. Lazarus, 2006:93; Scherer, 2001; Weiner, 1985*), which, nevertheless, has to be excluded given this work's presupposition regarding leaders' conscious positive intentions (*consistent with NLP in Alder, 1992*). In light of the previous "restriction", *Malle, Guglielmo & Monroe (2014)* have argued that blame, which is responsibility for negative events (*Lazarus, 1991a:148*), can still be attributed as long as the agent had the obligation and the capacity to act otherwise (*Lazarus & Smith, 1988 have made a similar claim*). In this sense, and consistent with the highly utilized and verified in practice (*i.e. DeZoort, Harrison & Schnee, 2012; Planas, Kimberlin, Segal, Brushwood, Hepler, Schlenker, 2005; Wohl, Pritchard & Kelly, 2002*) triangle model of responsibility (*Schlenker, Britt, Pennington, Murphy & Doherty, 1994*), it is argued that leaders' responsibility for an already accepted problem-crisis is determined based on the main dimensions of personal control and obligation (*Alicke, Rose & Bloom, 2011*). As far as obligation is concerned, it can be said that by definition leaders ought to take the necessary actions in order to avoid and/or face a problem-crisis (*e.g. Conger, 1992:18; Cribbin, 1981; Hersey & Blanchard, 1988: 86*). Characteristically, the EFQM excellence model (*2009: criterion 1b*) suggests that leaders have to "monitor, review and improve" their organization's performance (*Baldrige Award in Brown, 2009*). It is, therefore, left to controllability, which requires some further analysis since it is not as straightforward as obligation is, to determine whether causal responsibility will be accepted or not.

More precisely, controllability here is not equated with intentionality, but is considered as the potential ability to prevent a crisis from occurring (*Malle's, et al. 2014; Weiner, 1985*). According to the 85-15 axiom of quality philosophy (*Martin, 1993*) such an ability lies "almost" exclusively with top leadership. Indeed, as Deming (*Deming Institute, 2014b*) and Juran (*Garwood & Hallen, 1999*) have advocated and research has verified in practice (*Harrington, 1995*), 80 to 85 percent of the problems, including the major ones that interest this work, are embedded in the system and, therefore, are under management's control and responsibility. Even in extreme cases, in which failure's causation is highly affected by the external environment and/or outside managerial control factors (*Mellahi & Wilkinson, 2004*), it is still strategic management that "should" and "could" take the necessary either predictive or adaptive actions for

meeting the environmental changes (*Jennings & Beaver, 1997*). In this sense, it could be argued that no matter what the scenario might be, leaders should by virtue of their responsibilities be able to hold themselves accountable and willingly accept responsibility for those strategic (*Adair, 2011:98; 165*) decisions and actions, or non-decisions and non-actions, that brought the organization to a crisis stage (*Wood & Winston, 2005*). Before proceeding any further, it should be noted that the dimension of causal control impacts on the subsequent appraisal of coping potential (*Scherer, 2001*). Logically, then, the appraisal of coping potential is expected to entail retrospective implications regarding causal responsibility, which will be discussed in the following chapter (*sec. 8.2*).

7.3.2 Blame: The hot side of responsibility & its misattribution

Having described the concept of responsibility, it is time to focus on its “hot” aspect. According to *Alicke (2000)* any thoughtful conscious analysis of the criteria that underlie blame attribution is preceded, and therefore highly affected, by spontaneous and “relatively” unconscious evaluations of the same criteria, which are considered along with additional affective elements that characterize the event and the actors involved. Specifically, as *Alicke, et al. (2011)* argue, consistent with the current work’s notion of duality (*ch.6*), spontaneous evaluations (*intuitive appraisal*) formulate a blame hypothesis, which is, afterwards, reevaluated, and “sometimes” mitigated (*objectification*), by a system of deliberate (*reflective evaluation*) cognitive analysis (*Alicke, 2014*). On this basis, and by considering the appraisal of blame and credit suggested by *Lazarus (1991a)*, it is argued that the conscious experience of responsibility attribution is underlain by an intuitive appraisal of accountability (*fig.18, Ego-driven appraisal: Blame & Credit*). This intuitive appraisal shares similar characteristics with the attribution of responsibility (*Smith, et al. 1993*), but at the same time is hot (*Lazarus & Smith, 1988*), in the sense that it also evaluates the impact of a potential acknowledgement of responsibility on the appraiser’s social image, as this is judged by an audience (*Schlenker, et al. 1994: accountability pyramid – answerability*).

Logically, then, inasmuch as it takes place in the ego-driven system, the spontaneous evaluation of responsibility becomes susceptible to various biases that derive from the influence of personal motives and individual interests (*Alicke, Rose & Bloom 2011; sec. 6.3*). The result is an appraisal prone to blame misattributions that aim to protect the appraiser’s ego when this is necessary (*Epstein, 1994*). Essentially, accepting

responsibility for an already appraised problem (*link with goal incongruence*), which also refers to the company led by the appraiser (Wagner III, J. A., Gooding, 1997), will indicate, apart from the necessary hypothesis (Alicke, et al. 2011) for formulating a blame signal of personal responsibility (*e.g. problematic situation in my company*), a threat to leader's ego (*negative valence – aversive*). In this case, individuals are expected to act “egoistically” and defend the honours of their ego by attributing responsibility to external issues-agents (Miller, 1976; Snyder, Stephan & Rosenfield, 1976). Also, note that the ambiguity of causes which characterizes crisis situations (Pearson & Clair, 1998) leaves ample room for formulating defensive excuses. Indeed, as Alicke (2014) suggests, biased-defensive blame attributions are more likely to occur in ambiguous cases (*crisis characteristic*) and/or when there are strong evaluative reactions (*ego threat*). Anyhow, through this unconsciously motivated (*sec. 4.3*) self-serving bias (*defence mechanism: Self-serving attribution*), which is a validated phenomenon within the leadership context (Martinko, Harvey & Douglas, 2007), leaders deny responsibility and, thereby, reduce the already produced cognitive dissonance that still exists in the system (Gosling, Denizeau & Oberlé, 2006).

7.3.3 Mapping causal responsibility diagnosis: The self-conscious emotions

Following the previous analysis, it is suggested that there are three potential responses at this stage (*table 19*). Firstly, leaders could acknowledge responsibility, and, thereby, hold themselves accountable for the outcomes of the system as these are produced by their “subordinates” (Kraines, 2001). If this is the case, top leaders will direct emotional tendencies towards the self (Roseman, 2013) and, thus, will make a step towards the necessary strategic (Adair, 2011:98) and cultural (*link between leadership & culture in Bass & Avolio, 1993*) changes for overcoming the crisis (*change in mental models: Senge, 2006*). On the other hand, leaders could come up with various excuses that aim to eliminate any sense of personal responsibility (Schlenker, Pontari & Christopher, 2001). In this latter situation, leaders direct the produced action tendencies towards others (*e.g. blame employees, stakeholders*) or external circumstances (*i.e. blame the general economic & political environment*) and, therefore, compromise their response to the crisis (*argument driven by quality philosophy axiom described above; see also Pate & Stajer, 2001*).

Appraisals (Defence)		Internalize Responsibility	Externalize Responsibility	No responsibility attribution
			<i>(Self-serving attribution)</i>	
Cognitive Understanding		Acknowledging personal responsibility for company’s results.	Avoid blame. It is someone else’s fault. Perceive an external attack.	Avoid blame. It is no one’s fault.
Coping behaviour – instances		Paves the path for the formulation of intention to actively respond to the crisis by directing the emotional action tendencies. . .		No basis for formulating active response tendencies.
	 towards the self. Initial intentions to revise the mental models about how the system should organize. towards others. Project excuses that aim to reduce the sense of responsibility.since they have no specific direction. Engage in grieving.
Feelings	Type	Self-conscious	Basic emotions	Basic emotions
	Goal in- congruent	Sadness & Fear		
		Guilt & Shame Internal anger	Anger <i>(Entails shame)</i>	No additional emotion
	Goal congruent	Happiness		
		Pride	Gratitude	No additional emotion
		Note: The cognitive-behavioural elements on this table refer only to goal incongruent cases. Congruent ones are non-essential for this work.		

Table 19. Map for the responsibility diagnosis step

As far as the experienced feeling is concerned, the already sensed emotion of happiness or sadness will now change to a more distinct one (*Weiner, Russell & Lerman, 1979; Weiner, 1985*). In particular, it is argued that an internalization of responsibility promotes mainly, yet not solely (*Lazarus, 1991a*), the elicitation of self-conscious emotions (*Tracy & Robins, 2004*). This is logical, since personal responsibility for the causation of the case at hand will either falsify or vindicate a self-representation held by the individual (*ego commitment in sec. 4.3; Higgins, 1987*). Arguably, then, the leader is expected to experience pride (*Taking credit for the positive results*), either hubristic or authentic (*see Tracy, Shariff & Cheng, 2010*), in the face of goal congruent

incidences, or shame (*Failure to fulfil the ego-ideal of being a successful leader*) and/or guilt (*Harmed the company and its people*) in case of incongruent ones (*Lazarus, 1991a:240-271*). Note that the supported distinction between the emotional change themes of shame and guilt follows the view that shame requires public exposure (*i.e. social ego-ideal invalidated*) while guilt is more of an internal realization of the wrongdoing (*Smith, Webster, Parrott & Eyre, 2002*).

On the contrary, when external (mis)attribution takes place, the triggered defence mechanism fortifies the self-ego which remains relatively intact (*Miller, 1976*) and, therefore, basic emotions, which are directed towards others are promoted (*Roseman, 2013*). These include gratitude towards external agents (*Appreciation for facilitating business prosperity: Weiner, 1985*) in case of goal congruent evidence or anger (*Offense against organizational goals and ego-identity: Lazarus, 1991a:222*) in case of an incongruent one. In addition, the defensive basis upon which anger is generated may allow some non-defended remnants, as it is the case with the unconscious blame hypothesis (*Alicke, et al. 2011*), to become consciously available. The outcome is expected to be the expression of a secondary emotion of shame that will underlie anger (*shame and anger in Tangney, Stuewig & Mashek, 2007*). Last but not least, it should be noted that anger can also be internalized and, thereby, accompany the experience of shame and guilt (*Lazarus, 1991a:224*).

While leaders who act defensively will, most of the times, find a “scapegoat” to blame for the crisis (*Lazarus, 1991a:225*), cases in which blame attribution becomes vague and responsibility is placed on impersonal factors (*i.e. general circumstances instead of others: Sedikides, Campbell, Reeder & Elliot, 1998*) should also be considered. Under such conditions, leaders are expected to experience only the emotions of sadness and fear/anxiety (*Lazarus, 1991a; Roseman, 2013*), which, despite being inherent and essential aspects of the change process, are inadequate by themselves to instigate transformational changes. In particular, by manifesting the irrevocability of the status quo’s loss (*Lazarus, 1991a*) and, thus, the concomitant “internal death” of leaders’ ego (*Zell, 2003*), sadness sets the basis for triggering the process of grieving (*Jenkins, Wiklund & Brundin, 2014*). This response is indeed crucial, since grief is a coping response for coming to terms with the loss (*Lazarus, 1991a*) and its successful completion is a prerequisite for learning from failure and revising existing knowledge constructs (*Shepherd, 2003*). However, even if the grieving process leads to the

covetable outcome of disengaging from the established paradigm's commitments (*Albert in Bell & Taylor, 2011, 1984; Smith & Lazarus, 1990*), the "omission" of attributing causal responsibility will not allow the "new" to emerge.

Essentially, the acceptance of the irrevocable loss should also be accompanied by a set of active intentions, which presuppose the direction of any response tendencies towards either the self (*adaptive*) or the others (*defensive*) during the current stage of the process (*Roseman, 2013*). This is because, by misattributing responsibility to general circumstances (*Sedikides, et al. 1998*) and, thus, eliciting solely the emotion of sadness accompanied by a sense of fear (*Lazarus, 1991a; Roseman, 2013; sec. 7.1.3*), leaders direct action exclusively towards overcoming the pain of losing the old paradigm (*grief: Shepherd, 2003*). According to this logic, sadness refers to an irrevocable loss (*Lazarus, 1991a:247*), and, therefore, while it necessitates extremely high effort (*Smith & Ellsworth, 1985*), is underpinned by low urgency (*Scherer, 2001*), as taking action "now" seems to be in vain. Ultimately, unless an agent(s), or an entity(s), is held responsible for the crisis (*Roseman, 2013*), so that other negative emotions like anger (*external*) or, preferably, shame and guilt (*internal*) can accompany sadness, tendencies for actively responding to the crisis will not arise (*Smith & Lazarus, 1990*). Also, in this way the sense of high urgency that characterizes the emotion of fear (*Scherer, 2001*) is set free to impact on the change process and drive the formulation of an active response to the faced crisis.

8 Establishing commitment and desire for action

While essential, neither the awareness of the need for change (*problem detection*) nor the internalized intentions for taking transformational action (*causal responsibility*) nor (*urgency*) are adequate to drive the leader towards the initiation of the change process. Characteristically, as it has been suggested in the modified TTM model (*fig.2*), desire and commitment have to be developed so that change can be instigated (*preparation*). On this basis, the current chapter discusses the steps that take place in the second phase of the reflective state (*q.v. ch.7 for the first phase*) and analyse the appraisals (*intuitive & reflective*) that complement the initial intentions for change, as these have been formulated in the urgency check. In addition, the respective ego-defences that could reduce these intentions will be identified and discussed. The result, will be a map of feelings, behaviours and cognitive meanings that leaders could experience and consciously express during this phase.

8.1 Coping potential determination: Evaluating the level of controllability

8.1.1 Complementing urgency: Responsibility for action & controllability

In the previous section the discussion about the importance of urgency focused exclusively on the appraisal's ability to formulate the necessary intentions regarding the initiation of the change process (*Smith, 1989; Kotter, 2008:10*). While the requirements to explain the logic behind a potentially defensive response (*procrastination*) led to an in-depth analysis of the urgency check, the core of its contribution could be traced to a specific function. That is, through its underlying dimension of accepting the obligation to exert the necessary effort for change (*sec. 7.2.2*), the appraisal of urgency locates the locus of responsibility for action internally and, thereby, drives the individual (*intentions*) to formulate a problem-focused response to face the threatening event-crisis (*consistent with the PrE model: Mulilis & Duval, 1995; 1997*). This notion of action responsibility is essential for the change process, since according to the distinction made by *Brickman & his colleagues' (1982)* as well as the arguments promoted by various leadership theorists (*see Wood & Winston 2005:88*) the acceptance of causal responsibility (*sec. 7.3*) is inadequate in its own to trigger the change process. As it has already been mentioned, leaders should also realize

the importance of their role in leading change (*Gill, 2002*) and acknowledge the inherent in this role responsibility to accomplish the transformation (*Deming, 1994:116; Yukl, 2010:296*).

What is then left so that change can be instigated? Of course, the fundamental contribution of urgency to the change process is beyond dispute. However, the covetable sense of responsibility will not be consolidated (*Lalwani & Duval, 2000*) and the concomitant problem-focused strategies will not be effectuated (*Mulilis & Duval, 2003*) unless the resources and the effective mechanisms for controlling the identified threat-crisis are appraised as sufficient relative to its magnitude (*Weitzel & Jonsson, 1989*). Controllability has been widely accepted by management theorists as a determinant for the initiation and successful completion of a change process (*see Vardaman, et al. 2012:837*). This is because, in situations that are amenable to modification, individuals tend to generate higher levels of problem-focused coping strategies (*i.e. Folkman & Lazarus, 1980; Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986*) and take active steps (*Carver, Scheier & Weintraub, 1989: active coping*) in order to contend with the already appraised inconsistency (*sec. 7.1*). On the contrary, an appraisal of inadequate controllability betokens that any effort to change is in a sense futile (*Roseman, 2013*), and, therefore, emotion-focused strategies are formulated, while the current problematic situation is accepted as it is (*Folkman, et al. 1986*). In this sense, it seems logical to advocate that a crucial step in the schema and, consequently, organizational change process is the phase of coping potential (*George & Jones, 2001*), during which leaders appraise whether and how the perceived threat-crisis can be managed (*Lazarus, 1991a:150*).

8.1.2 The distinct reflective evaluations of controllability

It might be true that coping potential, and its core element of controllability, has been treated as a single evaluative dimension by some theorists (*i.e. Folkman, 1984: personal control; Lazarus, 1991*). However, within the scope of this work a distinction between the dimensions of control and power that is similar, yet not identical, to the one made by *Scherer (2001)* is adopted. In this way, an essential line between the appraisal of universal controllability by natural agents and the one of personal-company's ability to perform an adaptive action in response to the situational needs is drawn (*Scherer, 2001; see also universal vs personal helplessness in Abramson, Seligman & Teasdale, 1978*). In addition, research on organizational change (*Bandura*

& Wood, 1989) and employees' adaptation to it (Terry & Jimmieson, 2003) have demonstrated that a distinction between situational controllability and self-efficacy is legitimate, since the two appraisals make discrete contributions to the coping process (*i.e.* Terry, 1991; 1994). Obviously, then, an analysis of the schema change process has to adjust and adapt to the logic that underlies the difference between these two dimensions⁹.

Within the context of organizational change and management in general, the distinction between the dimensions of controllability originates in the works of Bandura & Wood (1989; Bandura, 1991; Wood & Bandura, 1989). Their theorization, which has also been adopted and applied in various business studies (*i.e.* Jenkins, 1994; Paglis & Green, 2002; Parker, 1998; Pearlmutter, 1998; Wang & Netemeyer, 2002; Weick, 1993), wants the perception of being in control over a change issue to be determined by the distinct, yet interrelated, aspects of environmental changeability and efficacy to effect change (Bandura & Wood, 1989). While both aspects encompass the notion of evaluating control, a difference in the way this notion is approached arises once someone draws upon Gist & Mitchell's (1992) analysis. More precisely, the former considers whether the issue at hand is under management's decisional control (Callan & Dickson, 1993; "some determinants are not controllable by anyone": Gist & Mitchell, 1992) as this is determined by the characteristics of the situation (*fig.18, Process step: Assess situational control*). The latter refers to change-efficacy appraisals (Haleblian & Rajagopalan, 2005; Weiner, 2009), according to which leaders evaluate if the company and its members are capable of exercising control and implementing change effectively (*fig.18, Process step: Evaluate change efficacy*). It should be noted that these phases constitute the two core aspects of controllability in the process of formulating efficacy judgments (Gist & Mitchell, 1992), which resembles the

⁹ Scherer (2001) suggests that control and power have been treated as a single appraisal under the umbrella of "controllability"; not the one of coping potential. His phase of coping potential includes the additional check of adjustment, which here has not been considered. This is because, the adjustment check is mainly necessary when control and power are low. Within the scope of this work this can happen only as a result of defensive appraisals, in which case "illusionary" adjustment can be considered as secured, due to the impact of the triggered defence mechanisms on the process.

evaluation of coping potential that has been advocated by the appraisal theories of emotion (*Lazarus, 1991a:225*)¹⁰.

Based on the recommended phases, the research will now try to identify what are the corresponding reflective evaluations that leaders conduct. It is argued that an equivalent to the phase of environmental-situational changeability is the check of control (*Scherer, 2001; also Smith & Ellsworth, 1985: Situational control*), during which leaders evaluate if the faced situation could be influenced by human decisions (*fig.18, Gnosis-driven evaluation: Control*). A sense of decisional control is essential for the change process, since it allows leaders to consider a wider range of alternatives for coping with the stressful event (*Callan & Dickson, 1993: logical analysis*) and, consequently, proceed to sophisticated large-scale changes (*Thomas, Clark & Gioia, 1993; see also sec. 8.3*). Also, although it does exist, the impact of control on the subsequent response-tendencies is not direct, but is mediated by the aspect of efficacy (*Wood & Bandura, 1989*). Indeed, if control is possible (*Scherer, 2001*), coping potential will be determined by the appraisal of capability to manage and cope with (*Frijda, 1987*) the change-issue (*fig.18, Gnosis-driven evaluation: Manageability*). Essentially at this stage, leaders develop the necessary readiness for action by evaluating the organization's collective efficacy to implement the change process effectively (*Weiner, Amick & Lee, 2008*). In this respect it should be clarified that within the scope of the

¹⁰ Efficacy is a wider concept compared to the appraisal of coping potential. Here the phases of efficacy and control are perceived as evaluations that, despite carrying beliefs from past experiences, are formulated dynamically in the light of task requirements and relevant evidence (*Gist & Mitchell, 1992*). However, control (*locus of control: Rotter, 1966*) and efficacy constitute also generalized traits (*i.e. I am capable of completing tasks successfully*) of the individual (*see Chen, Gully & Eden, 2001*) or are formulated, based on past experiences and domain-specific beliefs (*Experience shows that I am capable of managing my company*) that pre-exist the appraisal (*Bandura & Wood, 1989*). If considered as individual beliefs, they can be the reason why defence occurs (*according to the logic of this work: sec. 6.3*). On the other hand, as individual variables or as non-defensive beliefs (*accepting the shock: Hardy III, 2014*) they play a role to the process of coping with organizational change (*Judge, Thoresen, Pucik & Welbourne, 1999*), mainly through their impact on the appraisals of control and power (*Wranik & Scherer, 2010*). Yet the analysis of this impact lies outside the scope of this work (*some thought is given in sec. 11.7.2*).

current work, judgments of collective efficacy refer to the individual's appraisal of the organization's joint capability to cope with the change at hand, instead of shared beliefs about this capability (*see Bandura, 2000; Holt & Vardaman, 2013*). That is, they do not facilitate the enhancement of an organization's readiness for change per se (*i.e. Weiner, 2009; a subsequent step in change processes fig.2*), but motivate the leader to initiate the necessary transformational-strategic change in the first place (*Haleblian & Rajagopalan, 2005*).

8.1.3 Innate uncontrollability & hope: Responding to chaos

While a perception of control is necessary for responding adaptively to the crisis (*Vardaman, et al. 2012*), the disruptive nature of change (*Sharma, 2006:9*) is expected to produce, rather contradictorily, an initial sense of uncontrollability that needs to be accepted for change to occur (*consistent with Walinga, 2008*). Specifically, the chaotic in essence (*Bütz, 1995*) and continuously in flux (*Heraclitus in Osborne, 2003:99*) reality can constitute any system incapable (*breakdown in Farazmand, 2003:339 & 362*) of exerting everlasting control without questioning, as well as changing, when necessary, its practices (*quantum paradigm in Fris & Lazaridou, 2006*). For a company, the very same challenge arises once a crisis is faced, since the call for transformation in such cases (*Gopinath, 2005*) is underlain by the notion that the existing paradigm is unable to control and cope with the chaotic (*Gersick, 1991; Murphy, 1996*) crisis at hand (*Faulkner, 2001; Reilly, 1987*). From the individuals' perspective the experienced uncontrollability (*sadness*) and uncertainty (*fear*), as these derive from the crisis (*Liu, Perrewé, 2005; sec. 7.1*), create a motivational impulse to restore the diminished levels of order and structure (*Whitson, Galinsky & Kay, 2015*) by formulating a more accurate mental model about how the world operates (*schema change: see ch.3*). If procrastination does not arise, this impulse will be expressed as a set of goal and implementation intentions (*Gollwitzer; 1999*) that indicate the need to take action and respond to the crisis "now" (*Kotter, 1996*).

Once the need for change is developed, appraisals of coping potential get involved in order to determine, along with the already (*sec. 7.3*) attributed causal responsibility (*Scherer, 2001*), the most adaptive way to face the issue at hand (*secondary appraisals: Lazarus, 1991*). In particular, the highly problematic and uncertain characteristics of the crisis (*Gersick, 1991; Murphy, 1996*) necessitate an emotional response of hope (*Fear the collapse but yearning for the better: Lazarus, 1991a:282; 1999b*). What the

exact mode of this hope and, hence, the distinct cognitive and behavioral features of the action to be taken (*Eaves, et al. 2014; Webb, 2007*) will be, depends on how its element of agency will be realized (*Snyder, 2002*). By extension, then, the mode of hope, and consequently the nature of the response, is defined based on the way the already formulated (*urgency check: sec. 7.2*) intentions for action, which are reflected in agency (*Rand & Cheavens, 2009*), are shaped by the appraisals of coping potential (*Efficacy & agency: Bandura, 1989*). That is, the appraised outcomes will trigger a specific mode of hope (*Eaves, et al. 2014; Webb, 2007*) that will entail a respective motivational approach towards the imaginary conception, or non-conception, of alternative courses of action (*Snyder, 2002; et al. 1991*). Note that the course of action is not an actual one, but the very first outcome of individuals' mental capability to temporally extend their agency in the future (*Bratman, 2000*) and, thus, plan and write the script of their life (*Kennett & Matthews, 2009:329*)¹¹.

In broad terms the potential modes of hope can be either adaptive or maladaptive (*Lazarus, 1999b*), depending on whether uncontrollability will be realized as a benign reality that vindicates the need to change or as a threat to the self (*Walinga, 2008*). In its basis, innate uncontrollability is stressful for the leader (*Keown-McMullan, 1997*), as it poses a threat to the established order and the ego attached to it (*Leary, Terry, Allen & Tate, 2009*). If this emotionality is not adaptively regulated, leaders will aim to control the experienced threat (*Walinga, 2008*), mainly by defending against its source; the chaotic nature of the crisis (*defences are analysed below*). In such cases, hope is invoked in order to enhance irrational beliefs in status quo's viability and facilitate, or else justify, leaders' reluctance to let go (*necessary for change: Mavrinac,*

¹¹ According to Snyder (2002) hope requires agency thinking and the existence of workable pathways for achieving the desired goals. Here Bandura's (1989) logic is followed and more emphasis is given to agency. That is, an initial experience of hope can be triggered on the basis that when there is agency (*will*) there is, potentially, an *imaginary* alternative pathway (*Snyder, et al. 1991; emphasis added*) to achieve the goal of changing. Whether or not a precise pathway actually exists, so that hope can be sustained (*hope is part of an emotional process: Folkman & Lazarus, 1985*), will be determined after the instigation of change, which is a step that lies outside the scope of this work (*fig.2*). On the other hand, when capacity to achieve change is appraised as low, individuals can still construct illusionary pathways with the "hope" that they will lead to the covetable outcome (*defences analysed below*).

2006) of any old commitments (*Lazarus, 1991a:283*). Hence, this kind of hope prevents leaders from seeing the benefits of a potential alternative course of action (*Lazarus, 1999b*), and, ultimately, drives a decision against the instigation of the change process. On the contrary, if innate uncontrollability is accepted as a benign reality, the inadequacy of the status quo to respond adaptively will be acknowledged (*see above*) and, ergo, change will occur (*Walinga, 2008*). In these cases, hope has nothing to vindicate and, thus, can only serve as a yearning for the better that escorts the uncertainty about the future (*Lazarus, 1991a; 1999b*) which is inherent to any decision (*Walker, et al. 2003*).

Before proceeding to further analysis, it is essential to discuss the implications of causal responsibility attribution, as it highly interacts with coping potential (*Scherer, 2001*), on the mode of the hope to be triggered. Specifically, a misattribution of causal responsibility, apart from maintaining self-value (*motivational impulse for the defence: sec. 7.3.2*) by externalizing the blame to an agent, is also expected to decrease the experienced chaotic disorder and the concomitant uncontrollability, that characterizes the faced crisis (*idea derives from Rothschild, Landau, Sullivan & Keefer, 2012*). This is because, leaders perceive the issue at hand not as an outcome of inaccurate mental models (*self-conscious emotions shame-guilt: Lazarus, 1991a:240-271; Tracy & Robins, 2004*) that need to be reconsidered and restructured (*schema change: ch.3*), but as an offence (*anger: Lazarus, 1991a:222*) from an external agent to an otherwise workable and in order status quo (*sec. 7.3*). As a result, coping potential concerns the capacity of launching a counter-attack (*Lazarus, 1991a*) so that the self and the company can be protected from the external threat, while the logic of responding to a chaotic crisis becomes applicable only to internally attributed cases. Ultimately, hope in externally attributed cases will not be an outcome of defensive responses to crisis's chaotic disorder (*refer to sec. 8.3.3*). On this basis, the following sections discuss how the ego-driven mind treats uncontrollability, what defences could be triggered, as well as how hope is experienced and expressed.

8.2 Assessing situational control: Active vs Passive intentions

8.2.1 The inherent need for control & the notion of anchored controllability

Commencing from his libertarian beliefs, *Noam Chomsky (1988a)* supports that human beings possess an “*instinct for freedom*” that creates a want for an autonomous control

over their personal affairs, without externally imposed authoritative influences (Chomsky, 1999: *on language & freedom*). While Chomsky's politico-philosophical theorization is debatable (Edgley, 2005), recent evidence (Leotti & Delgado, 2011) seems to "indirectly" vindicate his beliefs on human instincts, by demonstrating that the opportunity to choose freely and, thus, exercise active control over a case, is inherently valuable for individuals (Aoki & colleagues, 2014; Fujiwara & colleagues, 2013). Among the numerous implications these results may have, particularly important for this work is Leotti, Iyengar & Ochsner's (2010) argument that the desire for exerting control – through choice - in threatening situations and, subsequently, regulating the accompanied negative affect are biologically motivated processes which serve the promotion of adaptive behaviour (Leotti & Delgado, 2011; 2014). Given, then, a case that is objectively susceptible to direct human-leader influence¹², it is worth wondering under what circumstances leaders who experience negative affect produced by previous non-defensive appraisals (*sec. 7.1-7.3*) could suppress their "natural" instincts (*consistent with Chomsky, 1998*) and deny the perception of situational control that is so essential for change initiatives (Vardaman, *et al.* 2012:837).

On this basis, it is argued that controllability could be repudiated as the unconscious mind formulates (*fig.18, Ego-driven appraisal: Anchored controllability*) the requisite motivational (Eitam, Kennedy & Higgins, 2013) commitment for actively exercising control through (Leotti, *et al.* 2010) a self-determined choice (Murayama, *et al.* 2013). In essence, simultaneously with an appraisal of modifiability (Frijda, 1987), which mirrors the conscious control check (Scherer, 1993b: *table 1*), the unconscious mind triggers, or more accurately has to trigger, a motivational impulse for action, by evaluating whether a need for active (*vs passive*) engagement with the concern at hand is necessary (Gratch & Marsella, 2004; 2007: *changeability*). According to these appraisals and given the faced crisis, a perception of active situational control (*i.e. the case is controllable and I have to do something about it*) is expected to be established, unless the past, which comes along with the appraisal of modifiability (Lisetti & Gmytrasiewicz, 2002), intervenes and manipulates the response tendencies (*consistent with Tooby & Cosmides, 1990*). Its potential impact is consolidated upon an initially

¹² The reader at this stage should consider the argument regardless of how he/she believes the objective reality to be actually established (*q.v. sec. 3.1.1*).

unconscious recognition that the faced crisis is uncontrollable (*Faulkner, 2001; Reilly, 1987*), given the capacity of the “existing”, and for some time in operation (*past in Lisetti & Gmytrasiewicz, 2002*), organizational routines, processes and course of action in general (*Booth, 1993*). As it has already been discussed (*sec. 8.1*), this recognition entails an ego-threat which has to be regulated to prevent leaders from helplessly surrendering to the experienced disorder (*Murphy, 1996*) and the concomitant status quo’s inability to exert control (*Walinga, 2008*).

8.2.2 Defending the status quo: Heteronomous compensation of control

An adaptive regulation will allow leaders to realize that, despite the perceived uncontrollability (*Walinga, 2008*), autonomy over a response, which will face the challenge and restore a new equilibrium (*Lewin, 1947*), still exists (*idea drawn from Kuntz & Gomes, 2012*). On the contrary, an unregulated threat will enhance the already produced aversive emotionality (*non-defensive appraisals sec. 7.1-7.3*), and along with the leader’s psychological ego attachment to the organization, will set the basis for justifying the status quo (*Proudfoot & Kay, 2014*). Specifically, the perceived uncontrollability and the sensed ambiguity-uncertainty of effect (*Pearson & Clair, 1998*) regarding the case (*refer to sec. 7.1*) could make leaders act defensively (*Walinga, 2008*) by devaluing the opportunity of taking action based on an autonomous and free choice (*Leotti & Delgado, 2014*). If this is the case, it is expected to see leaders compensating the identified uncontrollability (*consistent with Kay, et al. 2008; 2009; 2010*) through the invocation of an imaginary and external to social beings system (*defence mechanism: Heteronomous compensation of control*). Being external, these systems constitute a reality that is invulnerable to the flux of the social world, within which meanings of various entities (*i.e. paradigm or aspects of it in an organization*) are dynamically and continually (re)constructed by human beings (*heteronomy in Castoriadis, 1987*). Therefore, such systems attach a predetermined meaning of order (*Kay, Gaucher, Napier, Callan & Laurin, 2008*) to a crisis incident that is inherently chaotic (*Gersick, 1991; Murphy, 1996; see also above*), and, thereby, prevent the already formulated tendency for action (*appraisals ch.7*) from being fully deployed. This is achieved by:

- Mainly making the current status quo seem as what it should actually be (*justification in Proudfoot & Kay, 2014*), given the fact that what challenges its ability to exert control is beyond (*George & Jones, 2001*) the issues upon which

human beings can actively influence and manage (*manipulation of modifiability & changeability*). For instance, leaders could invoke McGregor's (1960 in McGregor & Cutcher-Gershenfeld, 2006:43-59) theory x beliefs about human nature (*beyond human beings' influence: see Sartre, 1975*) in order to justify the status quo and, thereby, reject change even when the problem has been accepted (Kitsos, 2011).

- Alleviating the stress caused by the internalization of causal responsibility. Scherer (2001) suggests that the ability to control a case greatly depends on the appraisal of causal attribution. Although this seems and probably is valid, here it is argued that low levels of autonomy can also trigger self-serving bias (*link in Knee & Zuckerman, 1996*) retrospectively. More precisely, driven by the need to find structure and order in the faced case, leaders formulate imaginary constructs that, apart from compensating control, serve as a kind of "illusionary" enemies that are believed to undermine the success of the organization (Sullivan, Landau & Rothschild, 2010). Ultimately, the imaginary construct provides a convenient scapegoat upon which the blame for the crisis can be placed (*idea drawn from Sullivan, et al. 2010; Rothschild, et al. 2012*). It should be noted that such a misattribution shares similar characteristics with the case of self-serving attribution (*sec. 7.3.2*). However, it is not equally direct, in the sense that the leader rejects only the idea of being free to choose the action to be applied (*volitional behavior control*), while the view that causal control lies with him/her is retained (*distinction in Alicke, 2000*). That is, leader's choices, which are accepted to have brought the crisis, are justified as the only possible ones, given the unchanged reality (George & Jones, 2001) instituted by the external controlling system (*i.e. human nature: Kitsos, 2011*).
- Providing a concept that could be used as an excuse for managing the psychological costs of a potential future failure (*collateral implication*). Individuals who are low on autonomy resort more often to self-handicapping (Knee & Zuckerman, 1998) for proactively coping with a threat (Nosenko, Arshava & Nosenko, 2014). That is, leaders know that any imminent failure could be attributed to the reality justified by the external system, which in turn offers a sense of proactive safety for the potentially threatened ego (Siegel, Scillitoe, & Parks-Yancy, 2005:589). Along the same lines, Feldman, Baumeister & Wong (2014)

claim that the denial of free will is a way to avoid responsibility for the potentially negative outcomes that a choice (*in which case is taking no action*) might entail.

8.2.3 Mapping situational control assessment: Feel the fear and do it anyway

As it has already been analysed mapping the emotional experience in the later phase of the change process will be based mainly on the emotional experience of hope and, more precisely, on how its element of agency is differentiated during the appraisal of coping potential (*sec. 8.1.3*). The first crucial distinction is drawn during the appraisal of situational control assessment, the outcome of which determines the passive or active nature of the formulated hope (*Ratcliffe, 2013:598*). That is, high control shapes agency as an active engagement to actualize the covetable future (*McGeer, 2004*), while low control creates a passive and wishful anticipation for something outside the self (*McGeer, 2004*), and probably the entire social institution (*transcendence in hope: Eaves, et al. 2014*), to resolve the faced issue (*Ratcliffe, 2013:598*). Consistent with the Greek tradition, this distinction and its impact on the response to be taken are sufficient to specify the adaptability of hope (*Pandora's Box in Vance, 2010: 413*), as this is demonstrated in the following two scenarios.

Autonomy, which is the quintessence of democratic societies, requires the explicit recognition that there is nothing but the society-organization, and the individuals within it, to ascribe meaning to the abyss-chaos of its own existence, and, thereby, institute the laws that will govern its own reality (*Castoriadis, 1993*). By abolishing transcendence, thought and action are liberated (*Homer in Castoriadis, 1983*), since any reality is acknowledged to be a derivative of human theorization, and, thus, becomes susceptible to challenge and revision (*Dauenhauer, 1985:468; Tasis, 2012*). Ultimately, hoping for salvation from something outside the social fabric becomes by definition inconceivable (*Homer in Castoriadis, 1983*), which, leads to a view that whatever the situational constraints might be, control over the response and agency for action lies “always” with the individual(s) of the society-organization (*Ober, 2008:8*). It could be argued, therefore, that leaders who accept the chaotic nature of a crisis (*Gersick, 1991; Murphy, 1996*) and come to terms with the concomitant innate uncertainty-uncontrollability (*sec. 8.1.3*), emancipate themselves from the current order by incarnating the outlook that things are “*capable of being otherwise*” (*Aristotle in Ross, 2009*). Such an understanding is realized as the necessity for and viability of

undertaking an autonomous response (Kuntz & Gomes, 2012), accompanied by an experience of challenge (Lisetti & Gmytrasiewicz, 2002) which is behaviourally expressed as a strong desire-intention to achieve a resolution of the faced issue (Smith & Kirby, 2001:124).

Appraisals (Defence)	Human Control		Situation Control (<i>Heteronomous compensation of control</i>)
	External causal responsibility	Internal causal responsibility	Internal causal responsibility (Only)
Response to innate chaos	(Not a concern)	Accepted Capable of being otherwise.	Compensated Incapable of being otherwise.
Cognitive Understanding	Autonomous response is viable. Therefore, it is necessary to:		Autonomous response and, thus, alternative ways of organizing are impossible, as the crisis derives from an uncontrollable reality.
	take measures against the responsible agent-target(s).	act so that control and order can be restored.	Current understanding and activities are inadequate, yet this is how things are.
Coping behaviour –	Undertake the challenge:		Passive acceptance of the crisis.
	and attack the blamed target(s).	that has emerged due to the crisis.	Absurd wait for crisis's self-resolution along with a critical stance against the negative.
Feelings	Sadness & Fear (<i>Emotions in the background</i>)		
	Active hope (<i>Promoted</i>)		Passive hope (<i>Formulated</i>)
	Anger	Guilt & Shame (<i>Internal anger</i>)	Transcendental (<i>Patient + Critical</i>) hope
			<i>Alleviates Guilt-Shame</i>

Table 20. Map for the control assessment step

Further clarification of a human control response can be achieved once the highly interrelated appraisal of causal responsibility (Scherer, 2001) is taken into consideration. In particular, if causal responsibility has been attributed internally, human control will allow the completion (*sec. 8.2.2: second bullet*) of the emotional experience of guilt and/or shame (Roseman, 2013) as well as will promote a response for their mitigation (Lazarus, 1991a). That is, responsibility for the crisis, as this is

expressed through the emotions' relational change themes (*sec. 7.3.3*) will be fully accepted, while a motivational impulse to apologize (*shame the adaptive case: Nathanson in Tangney, et al. 2007*) and respond for setting the issues straight (*guilt*) will be promoted (*Silfver-Kuhalampi, Fontaine, Dillen & Scherer, 2013*). In this work's terms, such a response presupposes that the leader will embrace the need (*Whitson, et al. 2015*) of formulating a more accurate representation (*schema change: ch.3*) regarding how the world works (*Senge, 2006:8*). On the contrary, an appraisal of human control over an externally attributed issue promotes the emotional experience of anger (*Roseman, 2013; Scherer, 2001*). Along with this emotional experience comes a cognitive conceptualization of the need as well as the viability of proceeding to a response in order to protect the offended personal and organizational goals (*Lazarus, 1991a; sec. 7.3.3*). In general, both cases create the behavioural intention to undertake the challenge and willingly seek a resolution of the imminent struggle with the faced issue (*Lazarus, 2001:44; Smith & Kirby, 2001:124*). Yet, what the response as well as the mode of active hope (*Ratcliffe, 2013:598*) will be, is going to be determined by the subsequent phase of change efficacy determination (*sec. 8.3.3*).

When the chaotic nature of a crisis (*Gersick, 1991; Murphy, 1996*) is treated defensively, leaders invoke external mechanisms that are able to formulate a perception of things being in order despite the low levels of control (*Kay & colleagues, 2008; 2009; 2010*). In such cases, the need to restore order and structure (*Whitson, et al. 2015*) through the use of personal and/or facilitative means (*human control*) that will (re)enable control (*Rothbaum, Weis & Snyder, 1982*) over future outcomes and, thus, allow to manage the crisis (*Fink, 1986:15*) becomes by definition inconceivable. This is because the chaotic nature of the crisis is concealed behind illusionary patterns which originate in imaginarily constructed extrasocial systems (*Castoriadis, 1993*). By lying outside the social flux, these systems institute indisputable absolute realities (*Castoriadis, 1987*) that "annihilate" in advance the ability to conceive alternative ways (*this is how things are*) of organizing and responding to the crisis (*Tajfel, 1974; 2010:6*). As a result, an excuse for the impotency of the current schemas and practices to exert control is provided and the crisis at hand is accepted as something that leaders have to bear and live with (*George & Jones, 2001*). The inability to conceive an alternative way to exert control and respond to the accepted need of facing the crisis now (*sec. 7.2*) can lead to an experience of despair (*Scherer, 2001*).

In order to avoid this painful state (*Lazarus, 1999b*), leaders rely on the transcendental reality (*Eaves, et al. 2014*) to hope (*Criticize the negative & patiently expect a deterministic negation*) for a future that leaves the possibility of a wishful (*McGeer, 2004*) outcome open (*open-ended hope: Webb, 2007*). Basically, by perceiving the imaginary construct as a saboteur of business success, leaders find a scapegoat (*Sullivan, et al. 2010; Rothschild, et al. 2012*) to blame, not for causing the crisis per se (*who of agency*), but for influencing (*why of agency*) their disastrous choices (*Lee, & Reeve 2013*). This retrospective transfer of responsibility is expected to alleviate any motivational forces prompted by guilt and shame (*Rothschild, et al. 2012*). Instead, the individual will become critical of the extrasocial reality (*critical hope: Webb, 2007*), which is perceived to prevent the otherwise accurate and potentially successful schematic beliefs from being deployed (*George & Jones, 2001*). At the same time, the convenient uncontrollability and the concomitant passive acceptance of the faced issue (*George & Jones, 2001*) are complemented with an active anticipation (*Waterworth, 2004*) for the eventual vindication of the current status quo (*Webb, 2007*). Such an anticipation neither does nor needs to entail concrete plans about how the wishful outcome will occur (*McGeer, 2004*) or a precise description of the visionary future to be achieved (*Eaves, et al. 2014*). Instead, the individual makes do with the absurd belief that despite the inability to exert control and actively engage, everything will be fine at the end, as the crisis will “somehow” get resolved (*patient hope: Webb, 2007*).

8.3 Evaluating change efficacy: Allowing a collective response to emerge

8.3.1 The inadequacy of heroic leadership to manage a crisis

As it has already been discussed (*sec. 8.1.2*), the appraisal of coping potential loads on a second dimension of control that considers the “*collective capability*”, or efficacy (*Weiner, Amick & Lee, 2008*), of a company to manage and cope with the crisis at hand (*Manageability: Frijda, 1987*). Driven by the logic of cognitive duality (*sec. 6.2*), the current work advocates the unconscious formulation of this “*collective capability*” based on a two-dimensional intuitive appraisal (*fig.18, Ego-driven appraisal: Power concerns*), the core of which is *Scherer’s (2001)* power check. Specifically, the basic dimension of the suggested appraisal evaluates the adequacy of the available means and resources, as well as the capability to mobilize them (*Weiner, 2009*), so that control over the physical and social requirements posed by the faced crisis could be “potentially” exerted (*Lazarus, 1991a:13; Scherer, 2001*). Notably, because of its focus

on the “potential” to control, this dimension elicits the emotional experience (*Roseman, 1996*), without considering (*most appraisal theorists do not: Brody, 1997*) what impact the evaluations of “actual” interpersonal power (*i.e. Kemper, 2006*), and the concomitant ego-threat (*see below*), could have on the change process (*Lawler, 1992*). Consequently, this dimension in itself remains immune to the influences of the socially constructed ego (*sec. 4.3*), and, thus, mirrors (*Scherer, 1999b: table 30.1*) the conscious and relatively ego-free evaluation of manageability (*Frijda, 1987*)¹³, which enables the trace of the objective reality as this is established by the evidence (*sec. 3.1.1*).

Given the previous, it is worth wondering, under what circumstances could leaders who face an objectively manageable case act defensively. In this respect, it is argued that the essential change capability (*Haleblan & Rajagopalan, 2005*) will not emerge to consciousness, unless its “collective” premise, which is manifested to the leader as an inability to cope with the chaotic nature of a crisis (*Gersick, 1991; Murphy, 1996*) solely based on his/her own heroic actions (*Yukl, 2010*), is accepted. As *Senge (1996)* characteristically claims, the complex issues faced by contemporary institutions require systemic changes, and, therefore, the notion of hierarchical authority is questioned (*By, Burnes, & Oswick, 2011*), in the sense that its inadequacy to provide sustainable solutions is more obvious than ever before (*Cooperrider, Barrett & Srivastva, 1995; Paraskevas, 2006*). Indeed, by being a response to inherently chaotic crises (*Gersick, 1991; Murphy, 1996*), transformational changes do not, and probably cannot, encompass the luxury of knowing in advance the final destination to be reached, let alone the precise steps/actions towards it (*Chapman, 2002*). This journey into the unknown contradicts the traditional approach to change, according to which leaders-agents possess an objective truth that simply has to be deployed down to the ignorant, resistant and apathetic masses (*Bartunek, et al. 2011*).

Instead, consistent with the democratic imperative, the call for a collective and dynamic co-construction of the new organizational reality to be attended is justified (*Bushe, & Marshak, 2009*). Essentially, then, once a crisis is faced, any notion of coercive and authoritarian power that springs from the established organizational hierarchies loses its legitimacy (*Chomsky in Kreisler, 2010:9*). Of course, this failure of commandism

¹³ *Scherer (1993)* links power check with *Frijda's (1987)* dimension of controllability. Here it is linked with the overlapping and more specific dimension of manageability (*sec. 8.1.2*).

does not imply the total abolishment of power (*Tannenbaum, 1956*), but suggests its wide distribution (*Raelin, 2011*) to autonomous and locally operating self-organized teams, the purpose and “coordinated” function (*leader-conductor: Deming, 1994*) of which have to be facilitated by top-leadership (*Nonaka, 1988*). Under such democratic orders, leaders have to empower the people to undertake ownership over and get directly involved with the process, while at the same time become “*methodological agents*” (*Haiman, 1951:33*) who promote and secure the overall ongoing democratic proceedings so that autonomous units can operate efficiently (*Gastil, 1994 on democratic leadership*). As a result, top-level commitment which is fundamental for change (*Crosby, 1984:98*) is not and cannot be exercised through forced control (*Choi, 2007:245*). But it becomes “top-down” support (*Luecke, 2003:33*) that fosters the autonomous operation of the involved units, with the aim of formulating a dynamic, coordinated and collective response to the faced crisis (*see Paraskevas, 2006*).

8.3.2 A threat to leaders’ personal power & its protection

Whether the necessary “collective” notion will be accepted or not depends on a secondary, in terms of eliciting the emotional experience (*Roseman, 1996*), yet fundamentally important, appraisal of own power (*appraisal inspired by Roseman, 1991*). Own power supplements the evaluation of “collective capability” (*Holt & Vardaman, 2013*) by introducing, or more accurately emphasizing, the distinct contribution of leader’s self-efficacy to the initiation and implementation of change (*Pearlmutter, 1998*). Of course, self-efficacy is part of and dynamically interacts with collective capability-efficacy (*Bandura, 2000*), an interrelation that supports as well as is supported by the overlap between the evaluative dimensions of power check and own power (*Scherer, 1993b: table 1*). However, apart from common evaluations of “potential” control (*see above*), self-efficacy by definition, similar to own power (*Roseman, 1991; 1996*), pertains primarily to the “self”, which, due to its social essence (*Castoriadis, 2007:156*), enables considerations of “actual” interpersonal power to emerge (*Lawler, 1992*). These are established through social comparisons (*Bandura & Jourden, 1991*) with individuals who share similar roles/identities and under an individualistic mind-set could entail detrimental effects regarding the perceptions of efficacy (*Bandura, 1991*) and, thereby, the initiation of change.

The concept of social comparisons under the logic of this work (*sec. 5.3*) betokens the propensity of leaders who follow the prevailing social norm and embrace the “heroic”

view of their role to oppose a collective response (*Senge, 1990:10*). More precisely, “heroic” leaders will comprehend the chaotic nature of a crisis (*Gersick, 1991; Murphy, 1996*) not as a call for a collective effort (*analysed above*), but as a force for a “threatening” redistribution of power (*Tushman, Newman & Romanelli, 1986*) towards their subordinates (*Saracer, Karacay-Aydin, Asarkaya & Kabasakal, 2011:215*). Such a perception arises due to the unique quality of democratic orders to reconcile the principle of equally distributed power and control with the potential emergence of distinct individuals (*difference with distributed leadership: Woods, 2004*). Hence, a threat consists in that the source of power departs from pre-established and privileged hierarchical positions and is relocated to the demonstration of excellence and merit (*Pericles in Meagher, 2008:15*). These qualities are not entrenched rights that come with leader’s positional power, but can be claimed by everyone alike after a continuous process of dynamic interactions among equals (*discourse paradigm: Ober, 2002:86*)¹⁴.

Apparently, the emerging “smell of freedom”, while essential for responding to a crisis (*Bolton & Stolcis, 2008*), is adequate and able to make “heroic” leaders feel ego-threatened and, thus, defend the need for change (*Pasmore, 2011*). Specifically, leaders who do not identify with the externally specified choice for a collective response (*Averill, 1973*) will experience reduced discretion (*agency in Barlas & Obhi, 2013*) to produce the desired effects via direct personal control (“heroic” power to: *Overbeck & Park, 2001*). On the one hand, the leader can accept this “default” (*adaptive regulation: sec. 8.1.3*) sense of powerlessness (*Sturm & Antonakis, 2015*) as a force for abolishing commandism (*Liberation: Mavrinac, 2006*), and, thereby, can allocate the coping resources towards the resolution of the crisis at hand (*Walinga, 2008*). On the other hand, the perceived lack of power can be explained, and rationalized, as a logical consequence of the fact that the leader is not, or seems to lose the privilege of being, in “managerial” control (*misconception in Oswick, 2013*). Arguably, this persistence on the heroic paradigm is expected to generate an ego-threat (*sec. 8.1.3*), which, could motivate leaders to act defensively in order to secure their positional-social power and, by extension, protect their ego-centred interests (*Williams, 2014*).

¹⁴ The researcher acknowledges that the analysis at this stage is rather a simplistic demonstration of how power is instituted in democracies (*i.e. Thorley, 2004*). The argument, though, about the equal right to claim the power should be clear.

Given that the restriction of the highly valued discretion to exert “heroic” control (Ashforth & Saks, 2000) cannot be justified (*sec. 8.2*) as an outcome of uncontrollable deterministic forces (Obhi, Swiderski & Brubacher, 2012), reacting to restore it becomes the most adaptive defensive response (Laurin, Kay & Fitzsimons, 2012). In such cases, leaders enter into a motivational state (*Defence mechanism: Heroic Reactance*) of psychological reactance (Miron, & Brehm, 2006), in which, contrary to the dictations for abandoning the heroic paradigm, they enhance their belief in it (Fitzsimons & Lehmann, 2004). The outcome is an excessive escalation of control over (power in Dahl, 1957) the environment with the aim of protecting the self-ego from the faced threat (*Feeding a need: Mavrinac, 2006*). More precisely, an initial response of reactance will manage to regulate the stress (*emotion-focused strategy: sec. 4.2*), as the threatening low levels of “control to” apply the change process (Walinga, 2008) will be substituted with the exercise of authority (Inesi, Botti, Dubois, Rucker & Galinsky, 2011). At the same time though, the necessary schema change process will not be addressed (Nesterkin, 2013), provided that the main concern of reactance is to deal with the threat (Walinga, 2008) that derives from the restriction on the freedom to exert heroic control (Miron, & Brehm, 2006). As a result, the innate uncontrollability of the crisis remains unanswered and, thereby, the leader gets entrapped in a vicious cycle of continuous control substitution, which is fulfilled through the escalation of commitment in an inadequate heroic paradigm that is disastrous for the company (Zhang & Baumeister, 2006).

8.3.3 Mapping efficacy evaluation: An urgent appeal for democratic praxis

From the perspective of feelings, appraising an issue as humanly controllable secures the necessary motivation (Eitam, et al. 2013) and establishes responsibility for action (*sec. 8.1*) so that recovery from shame can be achieved (Van Vliet, 2009). Consistent with Leeming & Boyle (2013), it is argued that such a recovery requires from leaders to either reinterpret the case, for example by rejecting the discrepant evidence (*sec. 7.1*) or externalizing blame (*sec. 7.3 & 8.2*), or reconsider their power in relation to their employees. The way the latter, which refers to the current stage of the process, will occur depends on whether the leader will relinquish power and chase collectivistic goals, or escalate the heroic paradigm and serve his/her egoistic needs (Ratcliff & Vescio, 2013). The result will be a respective conceptualization of organizational members’ efficacious agency that, in its turn, can give rise (Dauenhauer, 1985) to two

distinct emotional responses of hope; one aiming to individually and another to collectively driven transformation (*consistent with resolute vs utopian hope in Webb, 2008*). Note that an appraisal of high power can generate two additional modes of hopes, which differ from the ones discussed above in the sense that they are not a response to the chaotic nature of a crisis (*refer to sec. 8.1.3*).

According to *Roseman (1996)* reactance derives from the “belief” that, despite the appraised uncontrollability of a case (*i.e. low power*), establishing control is still possible. Within the context of this work, such a belief is realized as an emotional response of heroic hope (*Absurd belief in a heroic-based resolution of the issue*), which “fuels” leader’s pursuit of a self-originated resolution of the crisis (*resolute hope: Webb, 2007*). Essentially, leaders who engage in reactance become victims of an illusion that the overall control is restored only when personal control is achieved (*inspired by Oswick, 2013*). In consequence, instead of abandoning the heroic paradigm, leaders are expected to enhance their belief in it (*Fitzsimons & Lehmann, 2004*) and, accordingly, centralize control and increase authoritarian practices (*Staw, Sandelands & Dutton, 1981*). That is, leaders take advantage of their entrenched positional power (*Williams, 2014*) in order to enforce their will over (*Dahl, 1957*) the employees (*Sturm & Antonakis, 2015*) and, thus, compel them to accept and follow what they believe to be the right way of acting (*Bartunek, et al. 2011*).

Along the same lines *French (2001)* demonstrated that the inability to manage the emotional impact of the uncertainty, like the one in a crisis situation (*Gersick, 1991; Murphy, 1996*), leads to intensive, yet unproductive and non-reflective, organizational activity that is mainly directed from the top within an overall culture of bullying. It seems that change initiatives under this paradigm will include elements of what *Kotter (2008)* described as false sense of urgency (*link with sec. 7.2*). Hence, an emotional sub-loop, which is expressed as intangible fights among the leader(s) and lower-level employees, should be expected to accompany the heroic hope (*Rivero, 2014*). This rests on the logic that any burden to the realization of a self-originated resolution to the crisis has to be treated with aggression (*Reactions when having the goal-directed behaviour thwarted*) and, if necessary, punished and/or eradicated (*frustration-aggression hypothesis: Berkowitz, 1989*).

Appraisals (Defence)		High Power			Low Power (<i>Heroic Reactance</i>)
		Minor problem	External causal responsibility	Internal causal responsibility	
Response to innate chaos		(Not a concern)		Accepted	Reacted
				Indicator in favour of abolishing heroic leadership.	Logical consequence of losing positional power-control.
Cognitive Understanding		Need for a minor change should and can be initiated.	Action to face the external enemy-threat is viable.	Wide distribution of power is mandatory. Autonomous teams need to be formulated and empowered within an overall democratic order.	Become victim of an illusion that wants overall control to be restored only when personal control is achieved. Enhance belief in & authoritarian behavior.
Coping behaviour – instances		Prepare the organization for procedural adjustments.	Prepare the organization to deal with the blamed target & the attack.	Abolish heroism and seek ways to release the creative power of every single individual to face the crisis.	Escalate their authoritarian behavior, which is expressed as rigidity and false sense of urgency.
Feelings	Arise	Pragmatic hope	Martyrial hope	Democratic hope	Heroic hope
	Accompany	Negative low-intensity emotions	Anger	Guilt – Shame (<i>Reduced level</i>)	

Table 21. Map for the efficacy evaluation step

On the other hand, an appraisal of high power can generate three different types of hope, the mode of which depends on whether or not a defence mechanism has occurred in previous stages of the process. Initially, pragmatic hope (*Expect resolution with(in) current practices*) indicates a response to a discrepancy that has been minimized through “slight” trivialization (Starzyk, et al. 2009). As it has already been discussed

(*sec. 7.1*), in such cases the leader realizes a need and prepares for smaller-scale adjustments in cognitive schemas (*Johnson, 1988*). Ergo, schemas and mental models (*Senge, 2006*) are not challenged and change adequately enough (*George & Jones, 2001*) to trigger a transformation, and, thus, smaller scale changes will take place (*Sheldon, 1980*). A crucial characteristic of smaller-scale changes is that their procedural and linear nature (*sec. 1.3.2*), does not comprise or correspond to the high levels of chaotic uncertainty (*Doğru, 2013*). Therefore, hope is expressed as an expectation of highly probable outcomes (*Wiles, Cott & Gibson, 2008*), which lie within the realm of a rationality that is shaped by current practices and knowledge (*realistic hope: Eaves, et al. 2014*). Secondly, martyrial hope (*Wishful belief in the potentiality of the current paradigm to withstand & face the attack*) indicates a response to a cognitive dissonance that has been reduced through self-serving attribution (*Gosling, et al. 2006*). On its basis, the existence of a scapegoat formulates the perception that the faced issue is an offence from an external agent (*anger: Lazarus, 1991a:222*) to an otherwise workable and in order status quo (*sec. 7.3*). Ergo, hope in this mode is not required to vindicate anything old, but to serve as a yearning for the better that escorts the uncertainty about the future (*Lazarus, 1991a; 1999b*) that is inherent to any decision (*Walker, et al. 2003*). Also, while a scapegoat reduces crisis's innate uncontrollability (*sec. 8.1.3*) by providing a clear causal explanation of the issue at hand (*Rothschild, et al. 2012*), it retains the magnitude of the problem (*dissonance reduced through self-serving attribution*), which, logically compared to pragmatic hope, will generate higher levels of uncertainty regarding the future. Ultimately, it is suggested that martyrial hope will refer to a wishful desire (*higher levels of uncertainty but still possible: Eaves, et al. 2014; Wiles, et al. 2008*) that the current status quo will manage to withstand and cope with the externally originated attack (*Shaluf & Said, 2003*)¹⁵.

¹⁵ The argument was also inspired by the distinction that *Shaluf & Said (2003)* has drawn between crises and disasters. Specifically, an internal attribution of causal responsibility suggests the inadequacy of the current paradigm and calls for its change in order to face the issue. On the other hand, an external attribution is about withstanding an attack and coping with an issue, probably under harsh conditions, but nevertheless through the existing workable practices.

Finally, democratic hope (*Faith in individuals' potentiality for radical change*) indicates the absence of any kind of defense mechanism during the change process and, thus, the catholic embracement of a crisis's chaotic and uncertain nature (*Gersick, 1991; Murphy, 1996*). Similar to heroic hope (*see above*), the leader enters into a mode of "Heraclitian flux" (*Osborne, 2003:99*), where every existing absolute, related to the company and its operations, is challenged (*quantum paradigm in Fris & Lazaridou, 2006*). However, in the democratic paradigm the leader will also reject hyper-individualism, or else the myopic liberal independency (*Doyle, 2012*), which in the heroic mode is retained as an over-concentration of power (*Williams, 2014*) that results in a "desperate" pursuit of a self-originated resolution of the crisis (*Webb, 2008*). In essence, the leader acknowledges his/her intersubjective social condition (*Zilioii, 2002*), and places hope on the collective efficacious agency of interdependent individuals to conceive as well as actualize a radically different future (*Dauenhauer, 1985*). Ultimately, hoping means to have a profound confidence in the transformational power of the democratic praxis (*Webb, 2007*), according to which the crisis can, and will, be faced through the autonomous, free and on an equal basis participation of every single individual within the organization (*inspired by Appadurai, 2007*).

9 Designing the expert opinion study

The aim of this chapter is to present the methodological approach that was followed in order to verify the produced theoretical understanding of this work. It should be considered as a continuation of research methodology chapter 2, in the sense that it completes *Repko's (2006)* suggested process for interdisciplinary studies. The approach that has been adopted comes under the generic model for conducting evaluative research suggested by *Trochim (2000)*. Under this model three methods have been utilized; including expert opinion, literature review and gap analysis. The outcome was the development of a sophisticated process that can offer external validity to the theoretical framework that has been developed in the previous chapters. The underpinning logic and the steps of this process will be presented and discussed.

9.1 The logic behind the evaluation of the model

According to *Cronback (1982)* there is no unique approach to evaluation, a claim that justifies, as well as is justified by, the existence of various perspectives on how formative assessments can be conducted (*Brown & Gerhard, 2002*). Given the absence of a standard plan to be followed, the researcher adapted the general model of research evaluation (*Trochim, 2000*) so that the general requirements of this work can be met. Specifically, the purpose sought (*Newby, 2014*)¹⁶ was to design a methodological approach that would enable to receive fruitful feedback on the logic and, thereby, accurately revise the “form” (*Sanders & Cunningham, 1973*) of the interdisciplinary understanding that had already been generated (*Development design: Greene, Caracelli & Graham, 1989*). The result was an evaluative process (*table 22; further analysis of the steps in section 9.3*) that consists of three highly interactive methods (*fig.19*); expert opinion (*main method*), literature review and gap analysis (*supportive methods*).

¹⁶ The logic at this stage was inspired by *Newby's (2014)* argument that evaluation could be understood by considering the types of goals it can potentially address. On this basis, the design of the evaluation study was driven by the aim (*and its sub-aims*) to deliver a methodological approach that will be able to meet the needs of verifying the interdisciplinary understanding of this work.

Theory building phases (Lynham, 2002)	General steps of research journeys (Bourner, 2002)	Formative Evaluation Research (based on Trochim, 2000)	
Operationalization & Confirmation & Disconfirmation	Theory Testing	Formulate evaluative propositions & criteria	Design of the evaluation
		Conceptualize understanding in a testable framework	
		Identify & contact the experts	
	Theory Testing & Reflection & Integration	Collate the responses into a database	Analysis of the evaluation data
		Conduct a directional statistical analysis	
		Proceed (where necessary) to an in depth qualitative analysis	
		Reflect on the initial framework & conduct a gap analysis	
	Reflection & Integration	Revise current understanding & illustrate the changes	Utilization of results
		Discuss the research & its outcomes	
		Discuss implications & limitations (<i>Who, when, where of the theory</i>)	
		Propose areas for further work &	
		Conclude	

Table 22. The steps of the formative evaluation research

Inviting experts from the various disciplines and fields of study that have been used in this work to provide their “expert opinion” on the already generated interdisciplinary understanding, was chosen to be the principal method at this stage (Simon, 2003:208). This is because, apart from being a suitable method for conducting formative evaluations (Tessmer, 1993; 1994), expert reviews can maximize the benefits of an interdisciplinary research (Simon, 2003:208). Specifically, although the theoretical framework was developed according to a well-designed and sound research approach

(ch.2), the common feeling for many solo interdisciplinary researchers of “relevant ignorance” regarding the results wasn’t absent (Bazerman, 1988:244). In particular, “theoretical insecurities” derived from efforts to master knowledge, which not only were missing from the researcher’s academic background (Golde & Gallagher, 1999) but also required thorough reviews so that theoretical disagreements could be overcome (Wilson, 1996; i.e. literature on emotion). When theory building processes face such complex interdisciplinary issues, an expert opinion study is useful, as it can verify (Greene, et al. 1989) and potentially extend an initial theorization (Okoli & Pawlowski, 2004), by engaging experts in providing their knowledge on an imperfect and ill-defined conceptual framework (Simon, 2003:208).

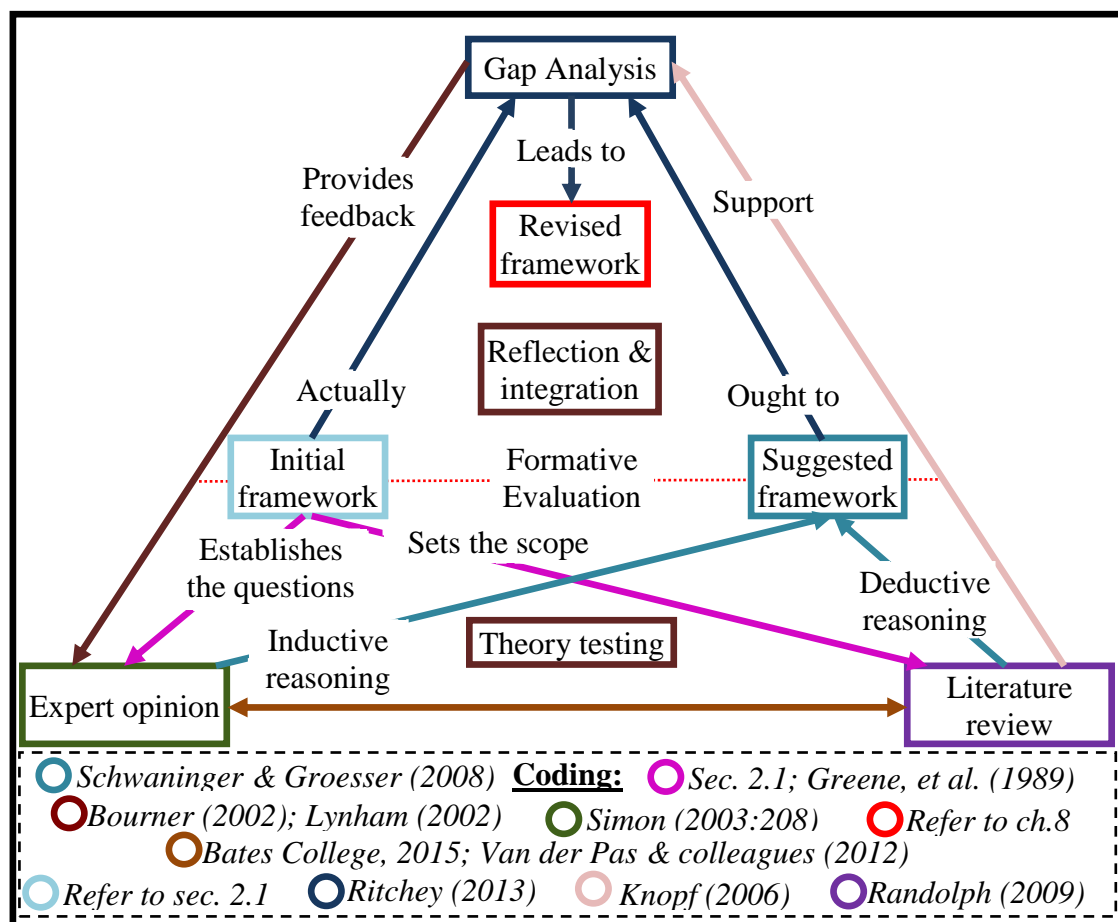


Figure 19. Mix methods for the formative evaluation research

The methods of literature review and gap analysis were also included in the research design in order to support the expert opinion study. As it has already been mentioned, the process of reviewing the literature is an inherent aspect of the entire research process (Randolph, 2009), with differences taking place on its focus throughout the various stages (University of Leicester, 2015). Here a change in the focus was triggered

by the feedback of the experts, since additional literature, which previously was either trivialized or ignored, was highlighted for review (*Bates College, 2015*). In its turn, the additional review of the literature provided a basis upon which the experts' opinions could be critically analysed (*Randolph, 2009*) and, thus, validated and/or even extended (*i.e. Van der Pas & colleagues 2012*). Through their continuous interaction, the experiences of the experts (*inductive reasoning*) and the established theories in the literature (*deductive reasoning*) facilitated the formulation of specific suggestions regarding the theory building process (*Schwaninger & Groesser, 2008*). Ultimately, what seemed essential was to identify and understand the gap (*Ritchey, 2013*) between these suggestions (*ought to be*) and the initial theoretical framework (*actually is*). The aim of such an analysis was to build on and/or revise, with the support of the literature, the initial theoretical construct (*Knopf, 2006*).

9.2 The process of evaluating the interdisciplinary understanding

The aim of the work at this stage was to develop a methodological approach that will verify the produced theoretical understanding and, thus, complete *Repko's (2006)* suggested process for interdisciplinary studies (*see table 4*). For that reason, an evaluation research was designed based on *Trochim's (2000)* general model that was modified accordingly in order to reflect the utilized methods of expert opinion (*Simon, 2003:208*), literature review (*Randolph, 2009*) and gap analysis (*Ritchey, 2013*). The result was a set of steps that contributed to the theory building process (*fig.6*) by fulfilling the requirements imposed by the phases of operationalization and confirmation-disconfirmation (*Lynham, 2002*). These steps are illustrated in *fig. 20* and will be analysed below (*q.v. app. 6*).

9.2.1 Stage 1: Formulate evaluative propositions & criteria

The first step of the evaluation research process was to formulate a set of propositions and criteria that could be presented to the experts, who, in their turn, would deliberate over them and, thereby, provide feedback on the interdisciplinary understanding (*Trochim, 2000*). To start with, the suggested propositions are a direct outcome of the theoretical advancements of this work (*Shields & Tajalli, 2006*), and reflect the logic behind every stage that contributed to the development of the interdisciplinary

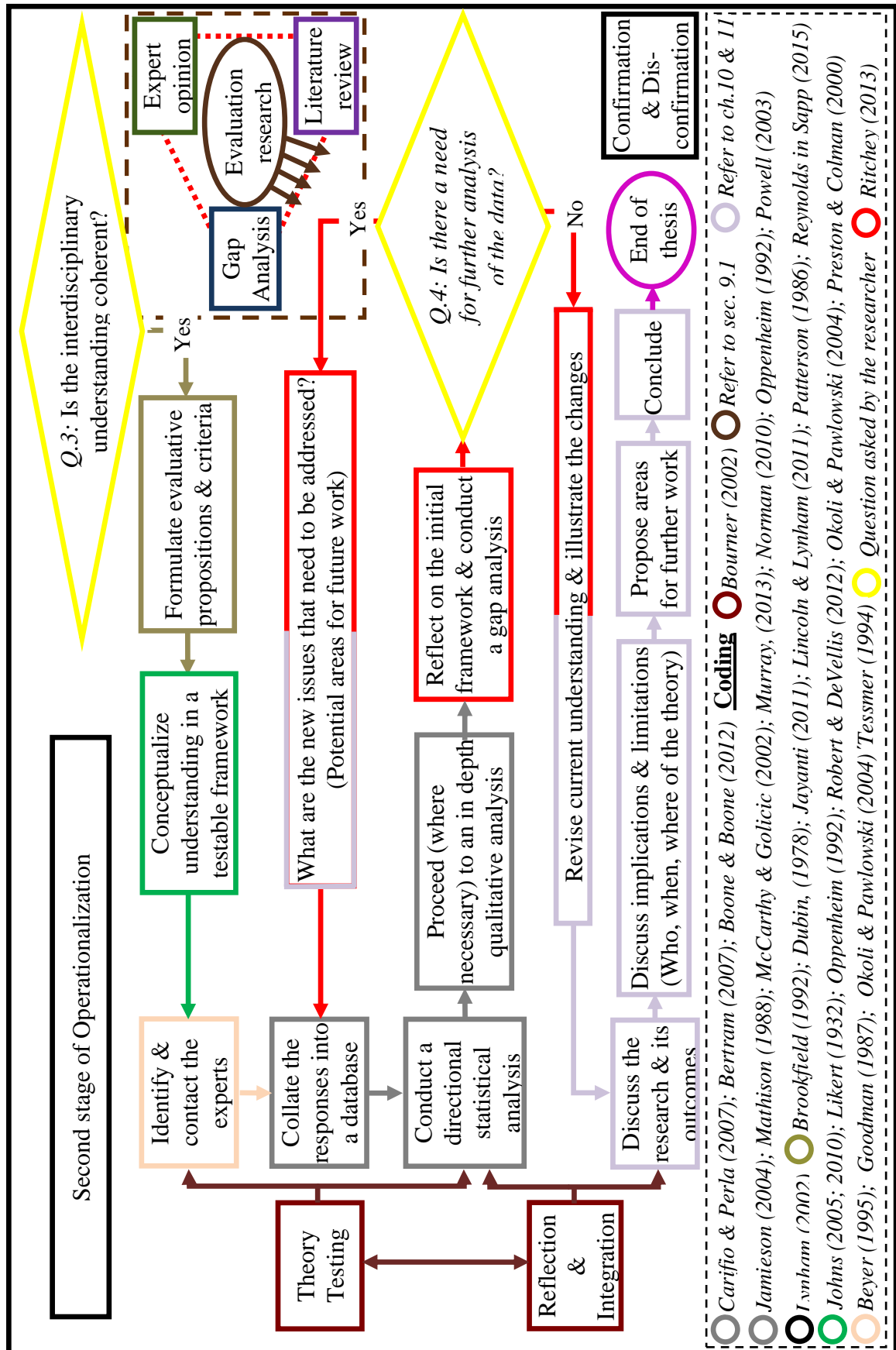


Figure 20. The process of evaluation research

understanding (*Bailey, 1994*). Note that propositions were preferred to hypothesis due to their abstract nature (*Sapp, 2015*), which enabled experts who were not that familiar with the literature of a specific discipline to avoid an in-depth analysis and comment solely on the reflected logic. The propositions are listed in appendix 6.1.

Also, apart from the step-based logic behind the conceptualization of the interdisciplinary understanding, it was also essential to verify whether the proposed theorization was able to meet the requirements of a well-constructed theory (*idea inspired by Holton & Lowe, 2007*). Therefore, the researcher, along with the specific propositions, considered the criteria for evaluating the interdisciplinary understanding that have been already developed as part of the theoretical aspect of this work (*sec. 2.4*) and have been presented in table 10.

9.2.2 Stage 2: Conceptualize understanding in a testable framework

The aim at this stage was to design a research framework that would enable the verification of the generated interdisciplinary understanding. For this reason, a Likert scale (*Likert, 1932*) was developed by utilizing the suggested propositions and evaluative criteria (*refer above*) as the basis for creating a set of straightforward and unambiguous statements for which experts' opinion could be sought (*suitability of the tool in Kothari, 2004:86*). The need for formulating these statements was that the propositions were considered as complex enough to abide by a set of basic principles, such as simplicity, short length and avoidance of double-barreled claims, which are necessary for the questions of a Likert scale (*Johns, 2010; Oppenheim, 1992*). As a result, the complex propositions were broken down into direct statements (*app. 6.1*) that enabled the experts to state the level of their agreement or disagreement without having to face issues that could make the evaluation process unduly difficult (*fig.21*).

Despite the existence of evidence suggesting that Likert scales with 7 to 10 point response options produce superior results (*Preston & Colman, 2000*), there were several factors that led to the use of a 5-point response format. In general, the qualitative dominant methodological approach of this work (*Johnson, et al. 2007*) reduced the need for a response format that will enable a sophisticated statistical analysis. Also, the high number of scale items (*statements*) suggested that the necessary variability could be captured with a smaller than 7-point response format (*DeVellis. 2012:89*). At the same time, a 2-point response scale seemed inadequate for capturing an accurate level of

feedback analysis (Preston & Colman, 2000), especially given the theoretical complexity of the evaluative propositions. Finally, the expert nature of the respondents (Simon, 2003:208) eliminated concerns regarding any potential negative impact from including a neutral-middle point (Garland, 1991; Johns, 2005), which along with the previous led the researcher to choose a 5-point response format as the most suitable for the needs this study.

Please tick one box to show how much you agree or disagree with the following statement(s)	Disagree strongly (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Agree strongly (5)
Px: Proposition x					
S(Px)1: Statement 1 of proposition x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
S(Px)2: Statement 2 of proposition x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	•	•	•	•	•
•	•	•	•	•	•
•	•	•	•	•	•
S(Px)y: Statement y of proposition x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Please comment (if you think it is necessary) on the reasoning behind your choices and your general view regarding the suggested proposition:					
.....					
.....					
.....					
.....					
.....					
.....					
.....					

Figure 21. The general form of the Likert scale items

The responses of a Likert scale provide a quantification of the qualitative opinions and, thus, allow some basic numerical analysis to occur (Ghuman, 2010:147). Yet, the qualitative dominant methodological approach that was followed within the scope of the current work (Johnson, *et al.* 2007) could not be based solely on this type of data. Therefore, the researcher asked the experts to comment, when they deemed it as necessary, on their choices and justify their reasoning, a practice that according to Okoli & Pawlowski (2004) enhances the results of an expert opinion study.

9.2.3 Stage 3: Identify and contact the experts

Keeney, Hassonn & McKenna (2006) suggest that a core lesson learned from previous studies is that there is no single absolute rule on how to identify and select the experts of a review panel. Within the scope of the current work, the researcher followed a step-based approach (*inspired by Okoli & Pawlowski, 2004*) the main aim of which was to recruit individuals who, on the one hand have the necessary knowledge, on the other hand were willing to engage in the evaluation process (*Goodman, 1987*). Note though that the element of knowledgeability should not be considered under a restrictive prism of logic. This is because, expertise is not a single category but comes in different levels (*Hoffman, Shadbolt, Burton & Klein, 1995*). As a result, the abstract nature (*Sapp, 2015*) of the used propositions, compared to the hypotheses which are more specific, will enable the experts, who are not that familiar with the literature of a specific discipline, to contribute in other aspects of the work (*Beyer, 1995*).

In total, seventeen experts were identified according to the sub-disciplines and fields of study that were used in order to construct the interdisciplinary theoretical understanding. The aim was to have at least one expert for each part of the proposed model. Specifically, the researcher reviewed the sources that were used for the development of the model and decided who the participants could potentially be. These experts were then approached via the contact details that they provide in their professional web-pages. In particular, e-mails were sent with the following information:

- An invitation letter the aim of which was to invite the expert to participate. This was the main body of the email.
- An introduction to the work the aim of which was to brief the expert about the research.
- A Participant Information Leaflet the aim of which was to inform the expert about the the study and what would happen to them if they took part.

The experts that will agree to participate, will receive a second email with the evaluation study was sent. This include the following elements:

- A PowerPoint with the actual study. In this document the propositions that have been described above, are dynamically linked with text analysis and illustrative diagrams so that the expert could have a full understanding of the propositions.

- Basic instructions on how to navigate and complete the study.
- The full thesis with the theoretical understanding, and a set of supportive maps that graphically illustrated the framework that had been produced at that stage.

Finally, the experts will be asked to complete the study and send their reviews back to the researcher within 3 months' time. All the documents that are relevant to this stage of the research have been included in appendix 6.2. Also, the PowerPoint with the evaluation study has been submitted along with the PhD thesis, in a CD-ROM form.

9.2.4 Stage 4: Collate and analyze the feedback

The received raw data will be collated into two separate tables, one with the numerically coded ratings of the Likert items and another with the respective comments of the experts, so that the subsequent statistical and qualitative analysis can be facilitated (*Mackenzie, 2005:15*). Initially, regarding the statistical analysis of Likert scales theorists have followed two main schools of thought. On the one hand there are those who argue that the produced data is ordinal and, thus, non-parametric statistics should be used (*i.e. Jamieson, 2004*). On the other hand, there are theorists who have suggested that even though the single items are ordinal, the scale as a whole produces interval data and, thus, parametric tests are suitable (*i.e. Carifio & Perla, 2007*). Given this debate, the researcher decided to use non-parametric tests for the analysis of the items, and parametric ones for the scale (*Boone & Boone, 2012*). In addition, following the suggestions of various researchers, Pearson's parametric analysis of correlation coefficients was utilized in order to describe the items' internal consistency and the level of agreement between the respondents (*Murray, 2013; Norman, 2010; Oppenheim, 1992:195*).

The statistical analysis of the Likert scales will be utilized as a guide for a subsequent in-depth qualitative analysis of the experts' responses (*qualitative dominant paradigm: Johnson, et al. 2007*). That is, for those statistical results that will be perceived as indicators of special patterns (*i.e. low median, big range or low correlation*), the researcher will collect every relevant comment, and after triangulating them with data from the literature, will develop a solid understanding of the case (*Mathison, 1988*). By returning to the literature after the collection of the empirical data, the researcher expects to be able to discuss the comments of the experts on a creative basis (*Powell,*

2003) and, therefore, increase the validity and reliability of the findings (McCarthy & Golicic, 2002).

Type	Test	What the test describes	Reference
Non Parametric tests	Item	Median (Si)	Boone & Boone (2012); Jamieson (2004); Bertram (2007)
		Mode (Si)	
		Range (Si)	
		Frequencies (Si)	
	Respondents	Median (Ri)	
		Mode (Ri)	
		Range (Ri)	
		Frequencies (Ri)	
Parametric tests	Sums of the scales	Mean	Boone & Boone (2012); Carifio & Perla (2007)
		Standard deviation	
Parametric analysis of correlation coefficients (Pearson)	Items' internal consistency	Measures the consistency between each item and the scales as a whole. Low consistency (<0.4) indicates that the item is a special issue that needs to be further analyzed, so that its retention, modification or rejection can be decided	Oppenheim (1992:195)
	Experts' level of agreement	The level of agreement between a pair of experts. Low agreement-consistency (<0.4) indicates that further analysis of the pair should take place	Norman (2010); Murray, (2013)

Table 23. Statistical tools used & their logic

After the suggestions from the experts will be captured, discussed and conceptualized, the researcher will conduct a gap analysis with their corresponding parts in the initial theoretical framework (*steps of a gap analysis in Ritchey, 2013*). The analysis of the gap can lead either to further consideration of the raw data (*fig.20: yes to Q.4*) or

towards the completion of the work (*fig.20: yes to Q.4*). The former represents the need for additional reflection on the expert opinion study in the light of the results from the gap analysis, a cycle which took place several times during the analysis. The latter indicates that the acceptance that the current research should head towards the end by illustrating what the necessary revisions to the initial theory are and proceeding to the final discussion of the work.

9.3 Ethical Considerations

Finally, ethical considerations needed to be addressed. The researcher designed the expert opinion study in such a way that the participants can be protected from any kind of potential harm. In sum, the nature of this investigation does not entail serious ethical risks apart from some procedural considerations, which are discussed at appendix 6.2.3. On this basis, the current study has been reviewed and granted ethical approval by the University of Warwick's Biomedical and Scientific Research Ethics Committee (BSREC): REGO-2015-1626; approved on 13th of October 2015.

10 An unsuccessful expert opinion study

The initial intention of this chapter was to present and analyse the data from the expert opinion study. However, the application of the empirical part of this research was unsuccessful. The experts that were contacted either did not respond to the invitation at all or responded negatively. On this basis, the current chapter will present the process that was followed and will discuss the various implications that were faced. Finally, the decisions that the researcher had to make in order to cope with this adversity will be presented and justified. Briefly speaking, this includes the transition from an empirical to a purely theoretical PhD.

10.1 The process of contacting the experts

10.1.1 Before the expert opinion study

Wilson (1996) discusses the unique features and challenges of conducting a solo interdisciplinary research. *Bracken & Oughton (2006)* focus on the language issues and argue that interdisciplinary projects need to allocate time in order to develop a shared understanding of different terms. The researcher faced similar difficulties during the developmental stages of the conceptual framework. The result was almost three years were spent on extensive literature review and thorough theorization for building the proposed understanding. Given that the developed understanding required empirical validation, an expert opinion study was designed and submitted for ethical approval.

10.1.2 Approaching the first tier of experts

Once the ethical approach was granted (*mid-October*), the researcher contacted the first tier of experts. This tier included 8 experts who specialize on the various disciplines and fields of study that have been used in the current study. The researcher gave four weeks for the experts to respond, during which time he was also writing up the theoretical part of the doctoral thesis. Unfortunately, no response was received from the experts.

A difficult decision had then to be made regarding the next step. More precisely, the immediate reaction was an intention to send a follow up email. However, such an approach was considered to entail the risk of being perceived as extra pressure for

responding to the questionnaire and, thus, could introduce response bias into the study (Paulhus, 2013:17). For that reason, the researcher decided to phrase the second email in a way that would minimize such negative implications. Specifically, the follow up email included a clear reminder of when the first email was sent, what it was about, as well as the following notice:

“I am concerned that I have not heard from you. My email may have been directed to your junk e-mail box or it may have failed to reach you for other reasons. If you are interested in participating in the research, please reply to this email and I will forward to you all the necessary information.”

Three weeks were given for the experts to respond. Unfortunately, two of them came back with a negative response.

10.1.3 Approaching the second tier of experts & the pursue of internal help

After the efforts for approaching the first tier of experts were proven fruitless, the researcher decided to approach a second tier. This second tier also included 8 experts, most of whom focus on the area of organizational management and change. Two of them have also published papers on the appraisal theories of emotion and their implications for change management. Three weeks were again given for responding to the invitation. Yet, the results were the same; none responded.

Having the experience from the first tier the researcher decided not to send a follow up email this time. Instead, he tried to search for help internally in the University of Warwick. Three members of staff were contacted; one from the department of Psychology and two from the Business School. Specifically:

- A meeting with a professor at the Psychology department took place. After a quick look at the model he stated that the effort for developing the conceptual framework is clear. However, neither could he help with the verification process nor could he think of someone being an expert in this area at the department. He suggested to come in touch with people from the Business School.
- An email was sent to a professor at Warwick Business School requesting an appointment. A brief description of the work was also included. The professor responded by stating that he does not work on emotions and he pointed to a colleague of his that would be able to provide some help.

- The researcher had two informal meetings with the second professor at the Business School. In this meeting some aspects of the model were discussed and feedback was received (informally). After these two initial meetings the researcher asked the professor whether he would be able to participate as an expert. Note that during one of the meetings, the professor stated his positive intention to help, but when a formal request was made there was no response.

10.2 The case for completing a theoretical PhD

10.2.1 The three different options after the unsuccessful expert opinion study

The process of contacting the two tiers of experts and seeking an internal reviewer lasted around 5 and a half months. During this period, the researcher was writing up his thesis and he had not received any empirical evidence for the verification of the conceptual framework. There were three possible options at this stage:

- **Apply to a third tier of experts (rejected).** Even if experts from a third tier had been willing to contribute, time constraints would have made such an option impossible to be completed successfully. The risk was perceived as too high and, thus, this option was rejected.
- **Seek internal help from members who are familiar with the research subject, yet not experts according to the core definition of the term (rejected).** The decision to seek internal help after the second tier of experts, was based on the fact that the presence of the researcher at the university could work as a catalyst for the study to be completed faster. On the same basis, and given that the experts of the university neither agreed to participate nor pointed out someone who could help, the researcher thought that he could address the questionnaire to members of staff who are not experts but who are familiar with the subject area. Such a choice was rejected mainly due to the suggestions of this work's supervisor. His basic argument, which after a discussion was also accepted by the researcher, was that the inclusion of non-experts would have minimum, if not negative, impact on the work (*Goodman, 1987*).
- **Complete a theoretical PhD (accepted).** In the light of time constraints and a huge amount of theoretical work, researchers in the past have chosen to conduct a theoretical PhD (*i.e. Savage, 2012: 289*). On this basis, the researcher came to

an agreement with his supervisor to pursue a theoretical PhD and explore any empirical contributions after graduation.

10.2.2 Justification of the choice to pursue a theoretical PhD

It should be mentioned that the researcher was quite hesitant about the option of continuing purely theoretically. Instead, he insisted on choosing the second option that is listed above. This was mainly due to the awareness that the existing paradigm regarding doctorate research in the field of management and business requires some sort of empirical contribution to be achieved (*Remenyi, Williams & Money, 1998*). However, there were three arguments that made him turn in favour of this choice:

- Initially, theoretical PhDs, while the rare exception, have been awarded in the two major fields of study that have been used in this work; psychology (*i.e. Boden, 2006*) and management (*i.e. Silverman, 2013*).
- Secondly, the supervisor of this work argued that this thesis is not a theoretical PhD per se, given that the original intentions were to include empirical evidence as well as that the actual study has been designed and discussed. Instead, it is an empirical research that did not happen due to causes outside researcher's control.
- Thirdly, according to the supervisor and the researcher, the theoretical part of this research is a contribution to knowledge by itself. A new theory has been formulated and there is no need for the safety that empirical research provides in case of failure to conceive novel ideas (*Harcourt, 1990*).

On this basis, the researcher decided to complete the rest of the process without any additional efforts to empirically validate the model. The informal feedback from the professor at Business School has been considered and changes have been applied in the model; especially in the concept of cognitive duality. Then, the researcher proceeded to the discussion of the work where an appeal for empirically validating the model has been made and a plan for that reason has been suggested.

11 Thinking about change instigation anew

The current chapter aims to conclude the thesis by critically discussing the implications of this research. Initially, the main objective of this work to challenge and advance the current understanding behind the dominant notion of “establishing a sense of urgency in order to instigate change” will be elaborated. On this basis, the most significant contributions of this thesis to theory as well as practice will be discussed. Afterwards, there will be a reflection on the followed approach and its main limitation will be considered. Finally, having identified the limitations, the chapter will conclude with a set of suggestions for either improving or expanding the current conceptual understanding in future research.

11.1 On challenging the concept of urgency

Consistent with *Hendry's (1996) claim*, a review of twenty-three PC models revealed that transformational changes commence with the acceptance of a “felt need” able to unfreeze the current paradigm (*Burnes, 2004c*). The most influential conceptualization (*By, Hughes & Ford, 2016*) of this diachronic common denominator has been offered by *Kotter (1996)*, who suggests that advocates of change have to establish a sense of urgency through the demonstration of compelling evidence that indicates a crisis in the system. However, even though *Kotter's (1996)* approach has been widely praised in the literature as well as used in practice (*Nitta, Wrobel, Howard & Jimmerson-Eddings, 2009*), concerns over its unchallenged assumptions have recently been raised (*By, et al. 2016; Hughes, 2016*). In alignment with these concerns, this work argues that the concept of urgency suffers from bias, mainly because it has been developed and validated based on anecdotal experiences (*Kelman, 2005*) with leaders who have been in favour of change. As a result, it takes as granted the existence of an all knowing (*fallacy 1*) and committed (*fallacy 2*) leadership, and thus it cannot explain or provide any substantial help with cases where unwilling senior managers do not instigate the necessary transformation in the first place (*i.e. Beugelsdijk, et al. 2002; Hodgkinson & Wright, 2002*).

On this basis, the current thesis sets out to identify why some business leaders avoid taking action even when evidence that indicates an urgent need for change has been

established. The complexity of the research problem made clear that any potential solution was going to lie beyond the borders of the change management's field (*Hansson, 1999*). Therefore, an interdisciplinary research approach (*Repko, 2006*), which brought together ideas that lie in the distinct disciplines and fields of management, psychology and, to a certain extent, philosophy, has been adopted (*Rhoten & Parker, 2004*). In particular, knowledge from these areas was systematically reviewed and used as an input for conducting reflective (*Buckley, et al. 1976*) sequential "thought trials" (*Weick, 1989*) which, in their turn, facilitated its gradual meta-synthesis (*Walsh & Downe, 2005*) into a solid interdisciplinary understanding able to address the research question. Through this process, the researcher was able to provide an outside perspective to the issue under investigation which ultimately led to the development of a conceptual framework that challenges, informs and expands the concept of urgency (*Nissani, 1997*).

The development of an interdisciplinary methodological approach that could meet the research needs of this work was the first objective to be addressed. Afterwards, having established the research framework, the thesis set out to deliver the following:

- Objective 2: Research within the general scope of schematic information processing how schemas change and construct a revised mental model.
- Objective 3: Establish the basic cognitive – emotional principles that underpin the schema change process at individual level.
- Objective 4: Determine the barriers that prevent leaders from perceiving and accepting the need for change.
- Objective 5: Determine the barriers that prevent leaders from committing to action.

The coming section will provide an overview of the interdisciplinary understanding. Then, the rest of the discussion will expand more on this understanding and will present its contributions as well as respective implications for theory and practice.

11.2 An overview of the individual change process

Overall, the research results confirm that the notion of urgency, as this has been developed and reflected in the literature (*Kotter, 1996*), offers limited guidance on how transformational changes are instigated. Instead, it is argued that more emphasis should be placed on the psychological demands behind the challenging mental shift that leaders "have to" undergo when a crisis is faced (*Thompson & Ryan, 2012*). If such a

perspective is adopted, researchers need to consider that apart from indicating a need for change, compelling evidence also presents an ego-challenge for the leaders, as it questions established mental models and schemas (*George & Jones, 2001*) concerning the self and the current status-quo within which these leaders have flourished (*Hill & Jones, 2011:11*). As a result, while proceeding to change in order to secure the continuation of business seems to be the only logical outcome, in some cases it is possible to see leaders either rejecting the need for change (*Pasmore, 2011*), or responding in ways that might go against organizational interests, but protect their threatened ego and secure their interests (*i.e. Levey, 2010*).

What the leaders' response in the light of compelling evidence will be, depends on a complex cognitive-emotional change process in which:

- a) subjective appraisals of the threatening evidence in reference to both business and personal-ego goals and concerns in general (*Scherer, 2001; Lazarus, 1991a*),
- b) adaptive (*Koole & Fockenberg, 2011*) or maladaptive (*Mauss, et al. 2007*) implicit regulations of the aversive emotionality (*Gross, 1999*),
- c) as well as problem and/or emotion focused coping strategies (*Folkman & Lazarus, 1988a; b*),

dynamically interact in order to construct the meaning of the case at hand. These advancements in theory and practice have been conceptualized in a model, a generic overview of which is illustrated in figure 22. Specifically, the figure includes the following elements:

- The 6 core evaluative dimensions of the change process that have been suggested (*yellow boxes at the top*), along with the respective potential appraising outcomes:
 - Adaptive appraisals (*green*).
 - Defensive appraisals (*red*).
 - Appraisals the outcome of which has been pre-defined based on the impact of previous (*defensive or adaptive*) evaluations (*blue*).
 - Appraisals that occur in the background of the process and need to be emotionally accepted and regulated (*light purple*).

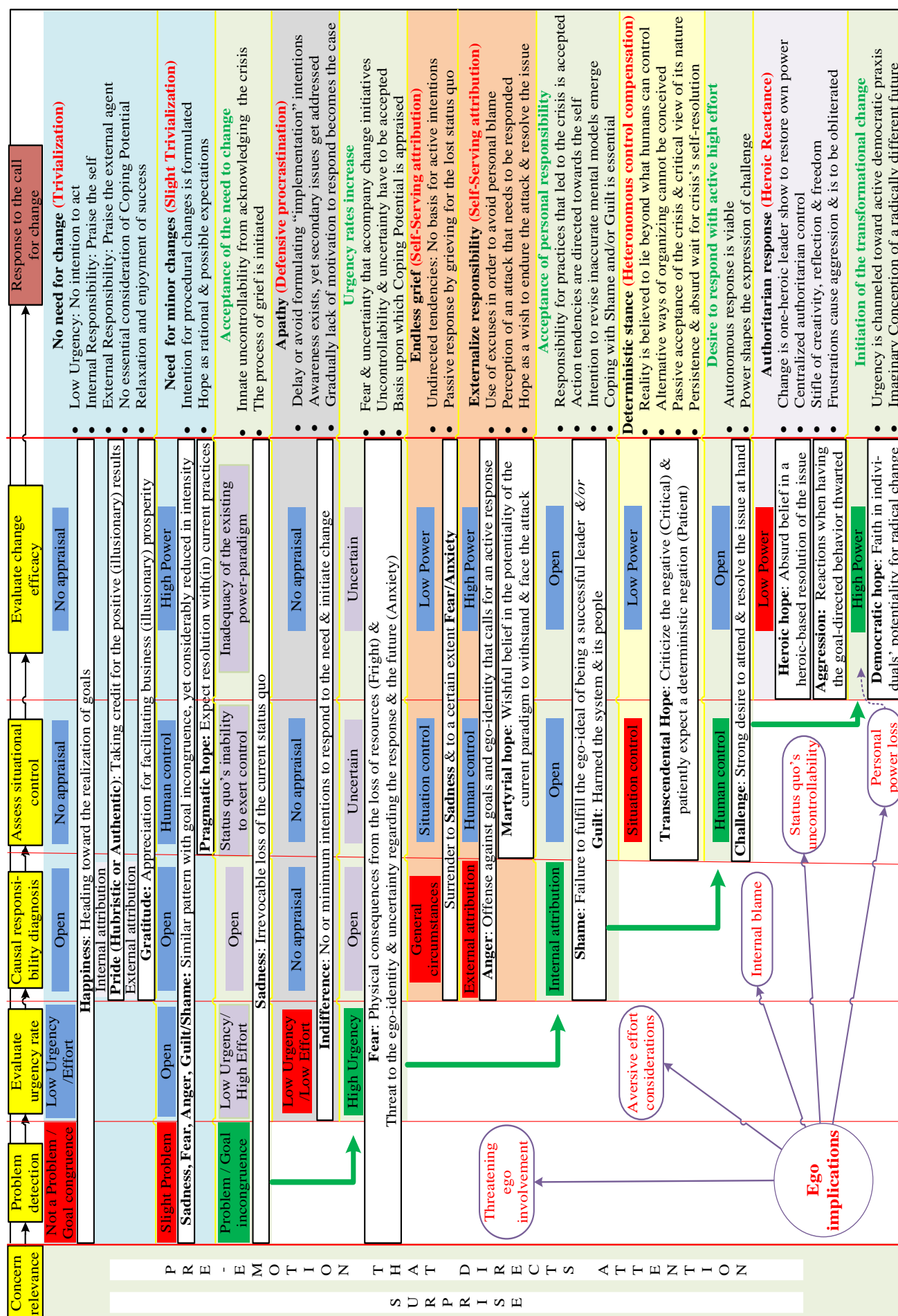


Figure 22. An overview of the individual change process

- The implications for the ego that each evaluation entails (*light purple boxes at the bottom left side of the figure*).
- The emotions that can be generated by the appraisals, with their core relational change themes (*boxes with black line*).
- The main coping responses to the call for change (*right side of the model*). For each response, the chart presents the respective:
 - Overall characteristic/description of the response (*title in bold black or green*).
 - If applicable defence mechanism (*red letters inside brackets*).
 - Main cognitive understanding & behavioural responses (*bullet-points*).

As it can be seen in the figure, a structural and classified approach of the basic responses that leaders can adopt when compelling evidence that call for a transformational change is faced is provided. More precisely, the evaluative dimensions, the expected emotions as well as the coping responses have been patterned (*Scherer, 2009b*) into two main categories. On the one hand, there is the adaptive scenario which essentially is an accumulation of adaptive responses in reference to every single evaluative dimension (*colour coded with light green and linked with green arrows*). On the other hand, there are the maladaptive scenarios which reflect a number of defensive appraisals that can occur throughout the change process (*colour coded with colours other than light green*). This distinction is grounded in an ecological view of emotion (*Volz & Hertwig, 2016*), in the sense that the adaptive appraising outcomes reflect a realization of the qualities that characterize a crisis situation (*i.e. Faulkner, 2001; Reilly, 1987*), while the maladaptive ones reflect a defensive distortion of this reality. On this basis, the following section will discuss the model and the implications that emerge from it in detail.

11.3 Instigating transformations: A dynamic & complex emotional process

11.3.1 Focus on the individual

In his Pamphlets, the famous writer *Leo Tolstoy (1900)* reflected on the concept of internal revolution, as the only enduring one, and concluded that human beings need,

first and foremost, to adopt an intrinsic approach to change¹⁷. The current thesis is grounded on a similar premise according to which “true” (Levy, 1986) organizational transformations commence with a profound, yet challenging, shift in top leaders’ internal mental representations (Karp, 2006) of what reality is and how the individual should act within it (Senge, 2006). Specifically, consistent with George & Jones’ (2001) seminal article, it is argued that at the individual level, compelling evidence that indicate a crisis (Kotter, 1996) is experienced as discrepant information that triggers cognitive dissonance. In its turn, such an experience motivates the leader to engage in a cognitive-emotional change process (Hendry, 1996), during which their existing schemas are extensively challenged. From this perspective, a successful response to the crisis would require that leaders overcome these challenges and accommodate their schemas, instead of simply assimilating the discrepant information (Piaget, 1954). It is only when such drastic changes in a leader’s schemas will be achieved that the process for a second or third order change in organizational schemas (Bartunek & Moch, 1987) will be initiated in the first place.

By focusing on the subject the current work illustrates that research on change needs to reconsider its approach towards the concept of compelling evidence. For Kotter (1996), and the burning platform school of thought in general (Kelman, 2005), change happens when evidence manifest a gap between the current and the expected reality that eventually becomes too big to be ignored or defended (Wright, et al. 2004). This approach, may be useful when heroic leaders utilize their coercive power (Lamprou, Leitch & Harrison, 2013) to purposefully create an artificial crisis with the aim of establishing a sense of urgency and, thus, bringing on-board unwilling employees (Kotter, 1996:45). Yet, as the establishment of the research problem demonstrated, the concept of top-executives feeding discrepant evidence to the organization is inadequate to address cases where the advocates for change are not the same people as the potential sponsors (Conner, 1993). Indeed, as a crisis escalates dangerously for the company, leaders can keep rejecting the need for change, until it is too late for any action to be taken (Weitzel & Jonsson, 1989). Ultimately, this thesis argues that if this issue is to be addressed, research needs to accept that crises are not purely objective phenomena (Mumford, Scott & Hunter, 2006). That is, although the existence of discrepant

¹⁷ His famous quote “. . . everybody thinks of changing humanity, and nobody thinks of changing himself”.

evidence is crucial, the motivation for change does not lie in the manifestation of the crisis per se, but behind the perception of this crisis by the individual subject.

11.3.2 A dynamic integration of cognition and emotion

George & Jones' (2001) schema oriented approach to individual change could advance significantly the scientific understanding regarding how leaders instigate organizational transformations. However, despite the fruitful contributions that their model offered within the scope of this research, after a point it was clear that a mere adoption of such approaches is more likely to produce outcomes that will remain captive of the established, yet fallacious, theoretical paradigm that tends to oversimplify, or even totally ignore, the role of emotion (*Bailey & Raelin, 2015*). Indeed, in *George & Jones' (2001)* model, as well as in other similar models in the literature (*i.e. Bovey & Hede, 2001*), the relationship between cognition and emotion is linear and non-dynamic, with the latter mainly playing a secondary role in a principally cognitive sense-making process (*Tobey & Manning, 2009*). A characteristic example is *Mumford, Friedrich, Caughron & Byrne's (2007)* model which illustrates the cognitive processes that leaders follow in order to deal with a crisis but gives no attention to the emotional dynamics that underlie these processes. After reflecting on this mistreatment of emotion, the theorization efforts of this thesis align with recent research in both organizational cognition and strategic management (*i.e. Hodgkinson, 2015*) as well as decision making (*Lerner, Li, Valdesolo & Kassam, 2015*), and, as a result, urge for a thorough integration of emotions in the field of change instigation.

It should be noted that emotion has recently been considered as an important element of change management. For example, *Tobey & Manning (2009)* argue in favour of a change process that is primarily driven by affective arousal and valence that is generated in the unconscious mind. A similar transition from cold to hot can be perceived in Kotter's work as well. *Kotter's (1996)* traditional approach of creating a crisis to induce urgency neglects, to a large extent, the emotional self and emphasizes the rational evaluations of the compelling evidence that are expected to construct a conscious understanding of the need to change. Recently, though, he took into consideration the "hot" side of the equation, by introducing the distinction between false and true urgency (*Kotter, 2008*) and, more importantly, the idea of using a big opportunity to galvanize unconscious positive emotions (*Kotter, 2014*). Whilst the inclusion of emotion is a welcome step, the logic of the previous analysis reflects the

classic debate between Lazarus and Zajonc on the primacy of affect vs cognition (*see Lazarus, 1999*). This debate though, and the distinction between cognitive and affective processes that it presupposes, bears little validity, as recent research suggests that the two are highly integrated and ontologically inseparable (*Gu et al. 2013*).

On this basis, this work suggests that if the essential shift in top leaders' internal mental representations is to be understood, futile distinctions of the past between cognition and emotion (*Phelps, Lempert & Sokol-Hessner, 2014*) need to be overcome. Rather, it is argued that the multi-componential nature of emotion (*Scherer, 2005a*) needs to be adopted for unlocking new perspectives to change that are not restricted by the existing paradigm of theorizing change as either cognitively (*i.e. George & Jones, 2001*) or affectively (*i.e. Tobey & Manning, 2009*) driven. Consistent with this view, the current thesis utilized the conceptual logic behind the appraisal theories of emotion in order to construct an individual change process during which the components of cognition, feeling and motivation dynamically interact (*Lazarus, 1999a*) in order to define the coping response to be adopted (*Folkman & Lazarus, 1988a; b*). In particular, it is proposed that, along a set of evaluative dimensions, valence-charged appraisals of the compelling evidence construct an emotional experience that, in its turn, informs and influences (*motivation*), through feeling, subsequent evaluations of the case at hand (*Hodgkinson & Healey, 2008*). By adopting such an integrative approach, this research aligns the field of change instigation with recent theoretical developments in psychology that make a case in favour of abolishing established distinctions between affect and cognition (*i.e. Duncan & Barret, 2007; Forgas, 2008; Pessoa, 2008; Storbeck & Clore, 2007*), and, thereby, leads to a better understanding of the change phenomenon under investigation (*Fugate, Harrison & Kinicki, 2011*).

11.3.3 Goals, ego-implications & the concept of emotion regulation

Following *Lazarus' (1999a)* triad, it has been argued that along with cognition and affect, motivation needs also to be considered in order to understand the emotional change process. According to this work, motivation depends on a valence-modulated mechanism which generates approach or avoidance action tendencies as the emotional experience unfolds (*Elliot, Eder & Harmon-Jones, 2013*) in reference to the goals that the individual holds and wants to achieve (*Rabideau, 2005*). Therefore, emphasis needs to be placed on the crucial role that goals play in orchestrating action (*Oatley, & Johnson-Laird, 2014*). As it has been demonstrated here, the teleological nature of

goals puts the entire appraisal process of change into context (*Campos, et al. 2010*). Specifically, in case of a crisis, leaders appraise the compelling evidence as regards to its implications and consequences for their goals (*Scherer, 2009a*), while the fate of these goals is simultaneously determined by the appraising outcomes (*Moors, 2013b*). If, therefore, emotions are rational mechanisms that promote the adaptational interests of the individual (*Scherer, 2011*), their action tendencies should promote information processing (*appraisals*) and prepare the individual for undertaking coping actions (*Lang & Bradley, 2013*) that will eventually secure the goals at stake (*Bagozzi & Pieters, 1998*). For example, once a leader who abides by the organizational goal of generating wealth and being prosperous (*Karoly, 1999*) receives compelling evidence that indicates a crisis, he/she is expected to realize the need for change and proceed to action that will promote the company's success.

The previous scenario supports *Kotter's (1996)* concept of urgency, yet it seems that the instigation of transformational changes is not that straightforward. This is because, the contentious appraisal process does not occur solely in reference to business goals, but, consistent with the distinction drawn by *Crown & Rosse (1995)*, it also takes into consideration leaders' personal goals. Some of these goals may refer to the business, yet some others can refer to personal ego-commitments, which in their majority lie in the unconscious (*Austin & Vancouver, 1996*) and construct the leader's ego identity (*Lazarus, 1991a*). By drawing upon this distinction as well as reflecting on the ego-centric paradigm that characterizes the contemporary theory and practice of leadership (*sec.4.2*), the current thesis proposes that the need for change can potentially be defended due to concurrent efforts of attaining conflicting business goals and ego-commitments (*Boudreaux & Ozer, 2013*). More precisely, the latter might be fed by the current status quo, and, thus, once they are included in the appraisal process (*Lazarus, 1991a*) they can promote experiences that reflect leaders' emotional attachment to the existing paradigm and, consequently, their inability to see an alternative conception of conducting business (*Hill & Jones, 2011:11*). Compelling evidence, therefore, does not always lead to action. Instead, the motivational tendencies that have been proposed above can promote coping actions that can be (*sec. 4.2.3*); *a*) either adaptive, in the sense that the leader responds to the need for change and thus promotes organizational goals; *b*) or maladaptive, in the sense that a defence

mechanism is triggered in order to protect the leader's ego at the expense of the organizational interests (*Tsui & Ashford, 1994*).

In order to understand how the response (*dichotomy presented above*) of the leader is decided, the current research suggests that the motivational attributes of emotion regulation need to be considered (*Lozo, 2010*). If a crisis is indeed a situation that calls for change in leaders' mind-set, then it is logical to assume that the disengagement from the pursuit of the desired state that a malfunctioning ego-commitment represents is necessary (*Brandstätter, Herrmann & Schüler, 2013*). Straightforward as it may sound, abolishing or devaluating ego-commitments does not come without pain. In such cases, the ego is most likely to experience a threatening identity loss that can trigger a defensive response to the need for change (*Bailey & Raelin, 2015*). Consistent, therefore, with recent research on strategic change it is argued that the instigation of transformational changes presupposes that leaders control these ego-protective tendencies (*Hodgkinson & Healey, 2011*). They can do so by regulating the negative emotionality that arises from the threat that the faced crisis imposes (*Sayegh, et al. 2004*). As a result, two different scenarios, which correspond to the two potential types of responses that have been mentioned in the previous paragraph, can be formulated. That is, leaders who struggle with the emotional change process can either adaptively regulate the stressful emotionality, bear the ego-loss and, thereby, proceed to change (*Karp, 2006*), or trigger unconscious defence mechanisms that regulate the emotional experience by distorting the evidence, and, thereby, respond inappropriately to the call for action (*i.e. Dunn, 2009; Hodgkinson & Wright, 2002; Kitsos, 2011*).

11.3.4 Into two interdependent minds

In order to understand the dynamic integration between emotion and cognition as regards to the motivational impulses for instigating a transformational change or resisting the need for it, it is essential to consider the highly corresponding distinction between unconscious/ automatic and conscious/deliberative processes (*Hodgkinson, & Healey, 2011*). In this respect, the current research reflected on relevant dualities (*refer to table 15*) that have already been established in various fields of the literature and formulated a dual-process approach according to which the mind works in two interdependent levels-systems. These include, an ego-driven system which is unconscious, intuitive, and highly affective, and a gnosis-driven one which is

conscious, reflective and relatively, yet not entirely, cold. The following figure describes the elements of the suggested duality.

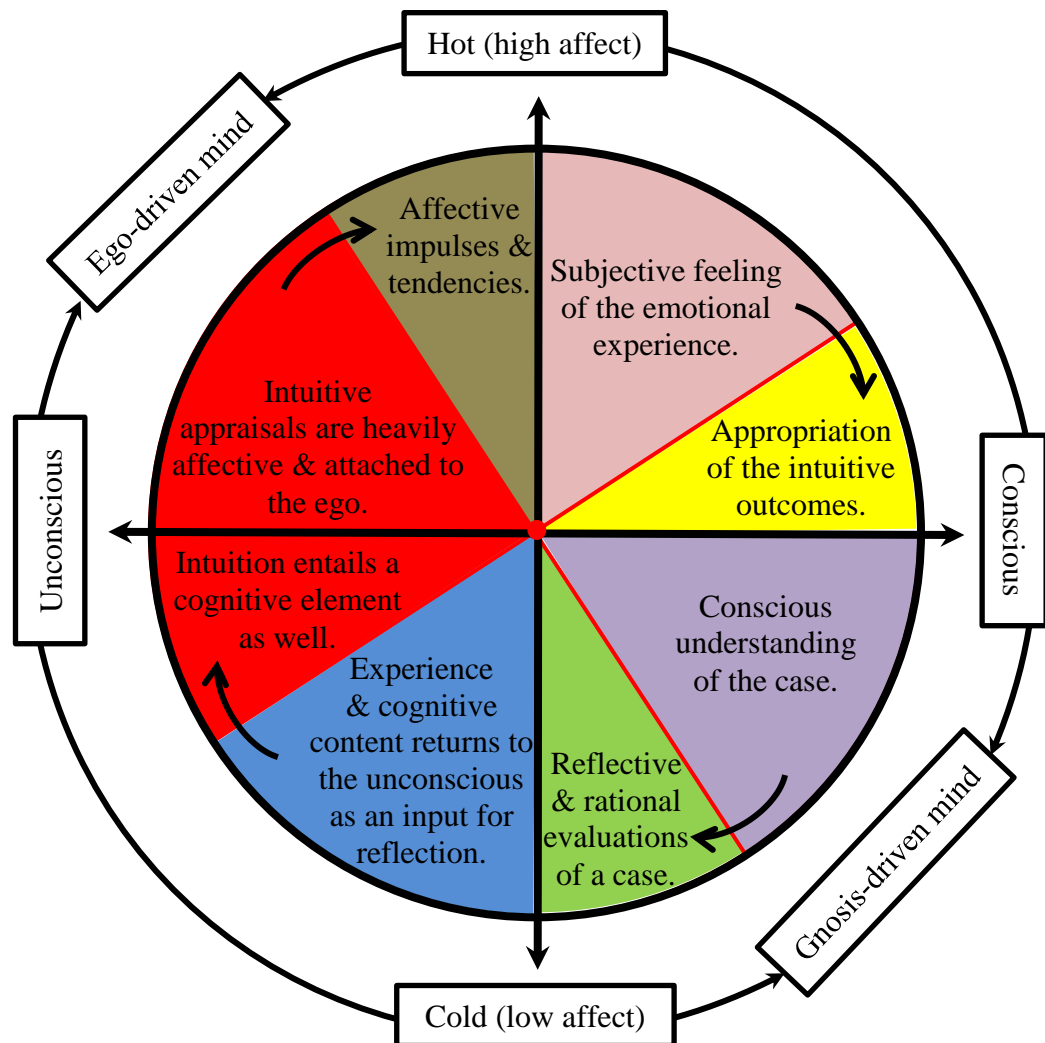


Figure 23. The elements of the dual system

Due to the nature of this work, the two systems were approached from an emotional perspective and under the need to dynamically integrate affect and cognition (*Phelps, et al. 2014*). Therefore, as *Hodgkinson & Healey (2014)* advise, the parallel-completive tradition was adopted, according to which the two systems do not operate on an either/or basis, or else in a kind of hot vs cold approach, in order to make a decision (*i.e. McCabe & Chen, 2015*). Instead, they work in parallel and, by continually interacting, generate a response in common (*Strack, & Deutsch, 2004*). In addition, this notion of dynamic interaction triggered the interest to construct an approach that not only superficially rejects the either/or logic behind the operation of the two reasoning systems but also explains their overlapping areas. As a result, the researcher had to challenge the established notion that affective processes lie exclusively in the

fast/impulsive system, whilst cold rational cognition is a privilege solely of the slow/deliberate mind (*Palkovics & Takáč, 2016*). In order for this to be achieved, the following theoretical foundations, and their respective implications for change, regarding the dynamic interplay between the two systems are suggested:

- In alignment with *Arnold (1960)*, it has been argued that the basis of the emotional experience is a set of intuitive appraisals that occurs in the unconscious ego-driven mind (*red part: figure 23*). However, these appraisals are not only cognitive (*cold*) but also entail a built-in valence (*hot*) dimension (*Scherer, 2010, 2013*), which makes perception of and feeling about an object ontologically inseparable (*Duncan & Barrett, 2007*). By making intuitive appraisals the core of the emotional change process a chain of further theoretical advancements was able to be conceived (*see below*), which, ultimately, supports *Akinci & Sadler-Smith's (2012)* claim that the inclusion of intuition can be beneficial for the field of *change* management.
- It has been argued that intuitive appraisals give rise to a) affective impulses that construct an unconscious valence-modulated motivational system (*golden part: figure 23*) of appetitive (*like*) or aversive (*dislike*) tendencies (*Lang & Bradley, 2010*), b) an emotional experience that emerges to consciousness (*Scherer, 2005*) through the subjective feeling (*pink part: figure 23*). The individuals are able to distinguish between knowing (*cold of intuition*) and feeling (*hot of intuition*) as they experience the emotion, but in the unconscious the two are inseparable and drive consciousness in common (*Duncan & Barrett, 2007*). According to this work, this phenomenological distinction in experience (*purple part: figure 23*) is responsible for the potential initiation of the reflection process, in the sense that it sparks thoughts such as “should I feel like that about this case” (*cognitive deliberation in Damasio, 2012:332*).
- Reflection though is not that straightforward but it is determined by some intermediate steps. To start with, the intuitive appraisals are projected to consciousness as affectively charged judgements (*Dane & Pratt, 2007*). There, they are appropriated (*yellow part: figure 23*) by the processes of the reflective gnosis-driven mind, a phenomenon that creates what *Wegner (2004)* calls an illusion of conscious will. Essentially, the conscious self believes that it is the

one which has created the judgements based on rational and logical deliberation (*the traditional view of cold rational cognition*), when actually their true source and originator remain well hidden in the unconscious “irrational” mind (*Carruthers, 2007*). Reflection processes, then, might be hindered at the current stage, which means that conscious understanding will derive directly from the ego mind.

- Not only does the conscious mind appropriate the intuitive outcomes, but as the parallel/competitive approach advocates, even when the reflective processes get actually engaged (*green part: figure 23*) their operation remains dependent on the intuitive mind (*Lieberman, et al. 2002*). By following *Velman's (2014)* approach to consciousness and recent empirical evidence on response inhibition (*Hepler & Albarracin, 2013*), the researcher formulated a notion of reflection that depends on both deliberate guidance and intuitive approval. More precisely, this occurs as the conscious mind formalizes the ongoing experience with its cognitive content, which, then, returns to the unconscious (*blue part: figure 23*) for a second-level intuitive evaluation that aims to regulate the ongoing emotional experience (*Gross, 2015*). This approach follows *Watts' (2012)* logic, according to which an adaptive regulation will drive the leader to reflect on the ego-dictations and, thus, make better decisions regarding the crisis. Unlike *Watt (2012)* though, the reflective processes are not conceptualized as purely cognitive, but require both cognitive and affective processes (*Luo & Yu, 2015*), which further supports the call for dynamically integrating the two in the context of management research.

By integrating cognition, emotion and motivation in this way, this work helps the academic and business community to understand how transformations are instigated. It does so by explaining the process of formulating the decision in response to the crisis, which will be discussed in the following two subsections.

11.3.5 Decision to change and implications for research

In principle, the previous theorization makes a case where cognitive and affective processes are fundamentally ingrained into two reasoning systems. These systems formulate a response to the crisis by engaging in a dynamic interplay that takes place outside an individual's awareness, with the intuitive mind having the primacy (*Sinclair*

& Ashkanasy, 2005). It is possible, therefore, to imagine a scenario in which leaders take decisions that go against the organizational interests (*O'Connor, Mumford, Clifton, Gessner & Connelly, 1996*) without though having the conscious intention to do so (*main assumption of NLP in Alder, 1992*). On this basis, the current thesis expands on the idea that *Bass & Steidlmeier (1999)* put forward in their seminal article and provides a theoretical framework that aims to explain how pseudo-transformational leaders can “*unconsciously act in bad faith*”. More precisely, leaders will not necessarily resist change by taking a conscious decision, for example, to suppress thinking in the organization and, thus, promote their own interests (*i.e. Christie, Barling & Turner, 2011*). Instead, it is possible that the unconscious dictations of the ego will drive this decision, when actually the conscious mind remains passive and simply appropriates the results of the former (*sec. 6.3.2: first way towards resistance*). In such cases the leader enters into a state of illusory objectivity, in which he/she has no awareness of the subjectivity that underlies the decision (*Pyszczynski, & Greenberg, 1987:302*). Ultimately, the theoretical framework of this work has the potential to explain cases where the leader has all the good intentions for supporting the organizational interests but eventually adopts a defensive response to the need for change (*i.e. Kitsos, 2011*).

Individuals do not always remain in an illusory state though. As it has been argued, based on the philosophical works of *Nagel (1989:4)* and *Nietzsche (in Anderson, 1998)*, leaders who may initially formulate an ego-attached perspective of the faced crisis can potentially reflect on the unconscious dictations of their ego and, thereby, objectify their views. As a result, the individual might end up with two contradictory meanings of the same case, one relatively hot and another relatively cold. This kind of differences between hot and cold perceptions have been discussed in change management under the logic of how insiders as compared to outsiders see the need for change (*Fiol & O'Connor, 2002*). Similarly, *Whelan-Berry, Gordon & Hinings (2003)* argued that the initiation of a change process might fail since what is urgent for executives might be dealt with indifference at lower levels. Consistent with various concepts in the parallel-competitive tradition, such as *Sloman's (1996)* notion of Criterion S and the antagonistic operation of the impulsive and the reflective processes in *Strack & Deutsch's (2004)* work, the current thesis argues that the same conflict can take place within the leader. In particular, conflict is an outcome of contradictory motivational valences; one of which derives from an ego-centric response to avoid change, whereas

the other one refers to the inhibition of this primitive response and aims to serve goals that will secure the organizational prosperity (*Corr, 2013*). If the former prevails, a defensive response to change is expected to be triggered (*sec. 6.3.2: second way towards resistance*).

11.3.6 Bounded rationality & change instigation

What does the previous analysis mean for the concept of change instigation though? The integrative theorization that was formulated here portrays individuals as bounded rational due to the human's natural cognitive limitations as well as the dependence of the deliberate system on the content that the intuitive system brings under its processing attention (*Dhar & Gorlin, 2013*). At the same time though, the current thesis argues in favour of two additional characteristics, including; a) the coexistence of hot and cold processes in the intuitive system as well as; b) the fact that a reflective counter valence that aims to inhibit the initial ego-centric responses requires both cognitive deliberation (*active system 2*) and an ego-driven approval (*system 1*) in order to be generated (*refer to sec. 11.3.4*). From this perspective, the results of this research support *Hodgkinson & Healey's (2011)* claim that bounded rationality should be perceived as driven and manifested through emotional processes. Such an approach suggests that if change instigation is to be understood, emphasis needs to be paid on the ego-driven system, as well as on the moderators that affect exclusively its operations (*Ferreira, Garcia-Marques, Sherman & Sherman, 2006*) and, more importantly, their affective elements (*Loewenstein, Weber, Hsee & Welch, 2001*).

In particular, the logic of providing more compelling evidence in order to make a case for change is based on the assumption that leaders who act as rational and deliberate thinkers will make sense of the threat (*gnosis-driven*) and, thus, will proceed to change (*Kotter, 1996*). However, as *Schwarz (2012)* demonstrated, leaders can deliberately rationalize their choice to stick with the current organizational structure, or paradigm in general, despite any pressures for taking urgent action. The results of this research provide a potential explanation for this controversy. That is, *Kotter's (1996)* work neglects the fact that while the presentation of compelling evidence makes a plea for the rational system to engage, the concurrent operation of the ego-driven affective mind cannot be avoided. Therefore, the severity of the case at hand can trigger ego-defences in the unconscious mind, which, given its primacy, can drive rational thinking in a way that will prevent change from happening. In this sense, it can be argued that relying

more on, or inducing, rational thinking in order to overcome defensive resistance might have the opposite effect, as the individual is motivated, according to the current unconscious, to vindicate the choices that support the current status quo (*Wong, Kwong & Ng, 2008*).

Conceptualizing bounded rationality as affectively driven, may advance existing understanding on how ego-defences operate. In their effort to reconcile cognitive biases with ego-defences, *Klaczynski & Narasimham (1998)* concluded that self-serving biases are not adequate to explain the phenomenon of bounded rationality. Individuals who are capable of making rational decisions, they claim, use this ability selectively. Similarly, *Karlsson, Gärling, & Bonini (2005)* call for research on the reasons why individuals make irrational decisions even when the viability of the alternatives that they have is clear and straightforward. As a response to these questions, this work argues that biases need to be considered as the cognitive processes of the ego defences (*Cramer, 2000*), which are larger constructs as they also include affective and motivational elements. Here for example, rationalization, either as omitting a discrepant message, or explaining the incomprehensible (*Bartlett, 1932:68*), was treated as a cognitive epiphenomenon, the motivational impulses of which lie in the mechanism of emotion regulation (*Lozo, 2010*). This logic comes into conflict with *Scherer's (1995)* argument that an exclusive focus on ego-defences might lead research to overlook cognitive biases that can cause similar disturbances in an emotional *change* process. Rather, the two need to be considered as aspects of a single entity in order to further understand cases of irrational defensive decisions from leaders.

11.4 Unfolding the entire emotional change process

11.4.1 Introduction to the discussion of the change process

From the previous it can be argued that the results of the current work support and further expand *Keller's, et al. (2012)* claim that appraisal theories of emotion provide an integrative framework for conceptualizing affect, cognition and motivation which is able to inform knowledge in already established fields in the literature. Indeed, the interdisciplinary understanding that has been developed here retains the important contributions of cognition in a mental change process, while at the same time it does not treat the information processing as a machine-like and affect-free phenomenon (*Walsh, 1995*). As a result, the researcher was able to conceive new propositions that

address the recent call for additional research on how schemas react to discrepant information and, thereby, affect change (*Hammond & Farr, 2011*). Ultimately, these propositions enrich the current understanding concerning the instigation of transformational changes as well as pave new avenues of knowledge. The following sections will further elaborate on the dynamic emotional change process that leaders undergo, by discussing its evaluative dimensions and their special relationship with the concepts of cognitive duality and (*adaptive or maladaptive*) emotion regulation.

11.4.2 The inadequacy of urgency & the evaluative dimensions

The evaluative dimensions that are suggested as elements of the change model, have been decided based on already established dimensions in the appraisal theories (*mainly Scherer, 2001*) as well as a reflection on the concepts of urgency and change. More precisely, according to Kotter (*2008:10*) urgency is a state where individuals not only are aware of opportunities and hazards but also desire to produce change by behaving in a fast and focused way. In this sense, urgency seems to encompass two additional elements that have been traditionally considered as necessary for change to occur; that is a recognition of the need to change (*refer to sec. 1.4*) as well as leaders' commitment to action (*Crosby, 1984:98*). However, this all-in-one perspective is not validated when the individual change process is perceived through the lens of the appraisal theories. In fact, for *Scherer (2001)* urgency is only one out of the many evaluative dimensions that occur during an emotional process, each one of which has its own distinct contribution, characteristics as well as cognitive demands. Consistent, therefore, with *Buchanan & Denyer's (2013)* claim on implementing change after dramatic events, it is argued that the evaluation of urgency is an important, yet insufficient, construct for explaining how leaders instigate change as a response to a crisis.

Instead, the assertions behind its all-inclusive concept need to be clarified and relevant evaluative dimensions need to be conceptualized. In this respect, appraisal theories of emotion (*i.e. Lazarus, 1991a; Roseman, 2013; Scherer, 2001; Smith & Ellsworth, 1985*) provide clear and straightforward guidance on how the dimension of urgency can be complemented. Specifically, alongside the evaluation of urgency, additional evaluations that reflect how the leader perceives the signals of a crisis and accepts the concomitant threat for the company (*awareness*), as well as formulates the respective initial response/action tendencies (*commitment*) to cope with it are suggested as essential for change to occur (*Gaspar, Barnett & Seibt, 2015*). These include the

evaluations of relevance and problem detection (Cowan, 1986), which establish the awareness of the need to change, as well as the evaluations of urgency (Kotter, 1996;2008), responsibility diagnosis (Wood & Winston, 2005), situational control (Bandura & Wood, 1989) and change efficacy (Weiner, 2009) that formulate the fundamental intentions to action. By breaking down urgency and clarifying its assumptions, the current research elaborates the emotional process that leaders undergo once they face compelling evidence and, thereby, extends the restrictive paradigm of “establishing a sense of urgency” that currently dominates the field of change instigation.

11.4.3 Awareness of the need: Appraising relevance & incongruence

In his classic book, Aguilar (1967) argued that information is of no use unless it is related to the concerns of the individual-leader and/or the organization. His claim clearly reflects recent results in psychology (Mazzietti, Sellem & Koenig, 2014) according to which attention is not driven by the received stimuli per se, but depends on them being appraised as relevant. In alignment with this argument, the current thesis demonstrated that the first stage of the change process refers to an evaluation of relevance, which, given a set of specific appraisal outcomes, can direct leader’s attention to the evidence that indicates the need for action (*figure 22: evaluative dimension of Concern relevance*). This call for specific appraisal outcomes reflects the researcher’s realization during the theorization process that a mere adoption of the relevance check is not adequate by itself to explain a schema change process. Instead, the relevance between compelling evidence and current concerns or goals needs to be established based on a fast and intuitive appraisal of the discrepant (*novelty*) and negative (*intrinsic valence*) nature of this evidence (Scherer’s, 2001 *break down of relevance*). Under these conditions, relevance gets into the service of a schema change process. That is, it generates a (pre)emotion of surprise in reference to the faced unexpectedness and, thus, informs consciousness about the discrepancy as well as motivates the self to engage into a meaning-making process (further appraisals) with the aim of responding to the case at hand (Reisenzein, Meyer, & Niepel, 2012).

Regardless of its importance, surprise is a primitive response and, therefore, does not guarantee by itself that the leader has made sense of the evidence and the respective call for action (Noordewier, Topolinski & Van Dijk, 2016). Therefore, after reflecting on the appraisal theories of emotion, this work conceptualized an additional evaluative

dimension, according to which the acceptance of the need to change depends on appraising the incongruency between received evidence and “business” goals. This approach echoes *Cowan’s (1986)* model, as it reflects the idea that the recognition of a problem requires not only to identify the discrepancy but also to classify it as such. In addition, it sheds some light on *Klein’s (2005)* challenge regarding the legitimacy of distinguishing between the processes of identification and classification. More precisely, under the logic of this work their overlap is accepted as well as explained and justified by applying *Reisenzein’s (2000)* cognitive-psychoevolutionary model of surprise. That is, the classification of a discrepancy, which has been detected at the unconscious level, as a problem (*incongruency*) or not a problem (*congruency*) can be seen as the reflective verification of this discrepancy in the conscious mind.

By working on these two overlapping levels, this work was able to distinguish between cases where the possibility of change is not reflectively considered by the top level (*i.e. Vuori & Huy, 2015*) and cases where the possibility of change is entertained but the response is to a large extent a compromise (*i.e. Beugelsdijk, et al. 2002; Donahue & O’Leary, 2012*). In essence, the two cases are triggered by the distinct defences of denial and trivialization that occur at different stages in the change process. To elaborate even further, the former is able to manipulate attentional processes, which impact on the appraisal of concern relevance (*sec.5.1.3*). In this way, two potential scenarios that can answer *Park’s (2010)* question regarding the conditions that make individuals omit discrepancies emerge:

- In alignment with *Van Peer, Grandjean & Scherer’s (2014)* claim regarding the amplifying effects of novelty on intrinsic pleasantness, it is argued that a discrepant message will intensify the emotional system by putting too much pressure on intrinsic pleasantness. If this negative emotionality is not adaptively regulated, the mechanism of selective attention will be triggered and, therefore, the discrepancy will be unconsciously assimilated (*sec. 5.2.2*).
- An accepted discrepancy needs to be related to the concerns of the individual as well. This will lead to an involvement of the conscious self with the problematic situation (*McCabe, & Chen, 2015*), which is necessary, but at the same time entails psychological costs (*sec. 5.1*). In such cases, the self might choose to disengage from the case either by disidentifying from the domain of

concern (*sec. 5.3.2*) or by discounting the message (*sec. 5.3.3*), which will prevent reflective thinking from occurring and, thus, will trigger a defensive response to the need for change.

On the other hand, the latter defence mechanism acts after the individual realizes the discrepancy. This is because the acceptance of relevance will give rise to the emotion of surprise, which will reflect the discrepant message to consciousness and, thereby, will inform the self about the faced threat (*Noordewier & Breugelmans, 2013; Topolinski & Strack, 2015*). As it has been argued above, in such cases the individual intentionally conducts a reflective appraisal of goal congruency in order to verify the discrepancy. However, according to the concept of duality, the actual mechanisms of this appraisal lie in the unconscious ego-mind (*Moors, 2005*) where the self takes also into consideration the dissonance between the compelling evidence and the ego-commitments. Therefore, it might be that from a business perspective the threat promotes action (*Kotter, 1996*), yet from the perspective of the self a defence of trivialization can be triggered to minimize the magnitude of the threat (*trivialization*) and, thus, reduce the already formulated dissonance (*sec. 7.1.2*). Ultimately, the leader will rationalize the need to take revolutionary action which will most likely lead to a compromised response of a smaller scale (*in response to O'Reilly, Leitch, Harrison, Lamprou, 2015:8*).

11.4.4 Preparing for change: Urgent tendencies directed towards the self

Whereas organizational literature is vocal about top management commitment when it comes to change (*Lozano, 2013*), research has largely ignored how individuals, and subsequently leaders, detach from the current status quo and develop the necessary desire for action when faced with compelling evidence (*Jaros, 2010*). In response to this gap, the current work aligns with recent theorizations that place emotion at the core of organizational commitment (*Mercurio, 2015*) and suggests that the instigation of transformational changes is the outcome of emotional action tendencies that are shaped by a dynamic appraising process. These tendencies are expected to arise with the realization of the need to change, due to the elicitation of sadness and fear, which call for ameliorative action (*sec. 11.4.3*). Yet, despite being a crucial aspect of the change process, plain initial tendencies are not enough to trigger a transformation. Instead, it has been demonstrated that these tendencies need to set in and impel the individual

towards urgent action (*Kotter, 1996*) as well as get directed towards the self (*Kouzes, & Posner, 1993*).

11.4.4.1 Urgency is a distinct yet interrelated evaluation

From the perspective of the appraisal theories, urgency comes from an emotional experience of fear. Indeed, although both sadness and fear are elicited when the leader accepts the need for change, the latter is established only when the case is also appraised as highly urgent (*Scherer, 2001*). In this way, the individual not only understands the irrevocable loss of the current status quo (*sadness*), but also realizes the imminent threat that is indicated by the faced crisis, in terms of both resources' deprivation as well as uncertainty about the future (*Lazarus, 1991a*). If this distinction between the two dimensions is to be retained as well as the role of fear is to be acknowledged, then it can be said that the results of this work advance *Kotter's (2014)* recent efforts to reconceptualise urgency through a big opportunity. They do so by elaborating on how compelling evidence, awareness and the establishment of urgency are interrelated, as well as explain their impact and role on the change process. Therefore, they offer useful advice regarding the actions that could be taken in order to shape the discrepant message in a way that will reduce, to the extent that this is possible, the emergence of fear (*Farkas, 2013*).

In particular, it is probably accurate to claim that individuals who are unaware of an issue or a problem will lack the necessary sense of urgency (*i.e. Kremers, et al. 2006*). This is because, an appraisal of urgency bears little meaning without an appraised incongruency, given that positively charged emotions (congruency) restrain the individual from undertaking ameliorative action. It is obvious then that the advocates of change need, first and foremost, to focus on making the existence of a crisis obvious, which according to *Kotter (1996)* can be achieved by presenting compelling evidence and, thus, establishing a state of urgency. However, an immodest investment in compelling evidence might eventually be problematic. Indeed, urgency might be related to congruency, yet at the same time it is a distinct evaluation with different cognitive and emotional demands. According to the current thesis, these demands refer to considerations of aversive effort, such as accountability for the future outcomes of an uncertain change process (*caused by fear*) and the need for a long term investment, which underlie the sense of urgency in the context of transformational changes. If the

aversive emotionality from these considerations remains unregulated, it could potentially trigger the mechanism of defensive procrastination that would prevent intentions for action from being formulated and, thus, would drive the individual into a state of apathy (*sec. 7.2*). Pressures of urgency, therefore, in their excess entail psychological costs for the individual that could prevent the change process from happening, which means that change advocates need to be careful when they try to establish urgency by using compelling evidence (*Murphy, 2015*).

11.4.4.2 Internal causal responsibility: a necessary evil

Once urgency is established, the action tendencies need to be directed towards the self. Quite often leaders try to face a problem by reflecting on their current mental models and, thus, applying practices that have worked in the past but maybe are inadequate to face the new challenges. The current thesis agrees with *Whetten's (1980)* claim that leaders who accept the problem yet intensify their commitment to the old practices, are driven by a fear to attach blame to their own schematic beliefs on the basis that this will have a negative impact on their reputation. As a result, leaders externalize blame for the discrepancy to a scapegoat (*Trahms, Ndofor & Sirmon, 2013*) which, from an emotional perspective, leads to anger (*sec. 7.3.3*) and, ultimately, in a kind of hope that the old practices will respond adequately to the external threat (*sec. 8.3.3*). Note that a precise attribution of causal responsibilities is neither necessary nor possible at this stage, since the ambiguity of causes inherent in crisis situations (*Pearson & Clair, 1998*) suggests that an in-depth causal diagnosis comes in subsequent steps of the problem-solving process (*Smith, 1989*). However, if a mind-set shift is to be achieved, leaders have to acknowledge that as the chief decision makers of the organization they bear a considerable amount of responsibility for the mistaken decisions that led the company to its current condition (*Hunter, Tate, Dzieweczynski & Bedell-Avers, 2011*).

By elaborating on the process of acknowledging responsibility in the context of the emotional change process for dealing with a crisis, this work raises two major implications. On the one hand, the model facilitates alternative approaches to the established practice of replacing a CEO who is inadequate to deal with a crisis (*Schoenberg, Collier & Bowman, 2013*). This is important, as such replacements are not always possible (*i.e. the CEO is the owner of an SME: Kitsos, 2011*). Sometimes change advocates have to work with the current CEO in order to promote change by

intervening, for example, in their mental representations and understanding of the faced situation (*Stanwick, 1996*). In addition, it makes a case for researchers to differentiate between crisis that are imposed by external events and the ones that are caused by improper management. That is, it might be true that both cases offer an opportunity for learning and renewal, as *Seeger, Ulmer, Novak & Sellnow (2005)* argue, yet the journey towards this goal is different. Specifically, external events, such as the attack of 9/11, might not pose a threat to a leader's ego. Rather, leaders might find a good opportunity to become the heroes that people need in order to identify with, create meaning and deal with the issue at hand (*Shadraconis, 2013*) which, ultimately, boosts their ego. However, when the crisis is caused due to internal issues, leaders are the ones who have to abolish the old and search for new meaning in the first place, which presupposes an open acknowledgement of the current paradigm's inadequacy and, thus, the threat to their ego. In this case a defensive response is much more likely to arise.

11.4.5 Proceeding to action: Commitment & the different types of hope

One of the main premises of this work is that even if awareness of the crisis and urgency are established, change may still not happen due to lack of commitment (*fallacy 2: sec. 1.5.3*). Looking at this puzzle from the perspective of the appraisal theories, led the researcher to conclude that even though urgency, along with internal responsibility, prepares the leader for action (*refer above*), a crisis will remain unanswered unless the coping potential is positively evaluated (*Gaspar, et al. 2015*). Following *Scherer's (2001)* model, coping potential has been separated into the sub-checks of control and power. In this sense, the leader has to; a) accept managerial control over the decision to be taken (*Bandura & Wood, 1989*) as well as; b) believe in a company's power to launch a response for dealing with the issue at hand (*Weiner, 2009*). Therefore, consistent with *Armenakis & Harris (2009)* it is suggested that efficacious beliefs contribute to the formulation of commitment to change. Indeed, efficacy consolidates a sense of responsibility for active response, which complements the tendencies that have been produced by urgency and internal causal responsibility and, thereby, enables the individual to construct a problem-focused coping strategy to deal with the crisis at hand (*refer to sec. 8.1.1*).

Why is it so difficult, then, for senior managers to formulate the necessary responsibility for action and, thus, commit to change? In principle, the results of this thesis echo *Hodgkinson & Healey's (2011)* claim that commitment to the new requires

first and foremost that the leader deviates from the existing paradigm of action by abolishing any ties with the old status quo. On the basis of *Kotter's (1996)* assumptions, this might sound straightforward given that the crisis has been accepted and urgency has been established, yet from the perspective of the emotional change process the leader has to deal with three core challenging hassles (*sec. 8.1.3*). These are:

- Accepting that the innate uncontrollability of the current status quo to deal with the case at hand, which arises from the very existence of the crisis, is a benign reality that calls for change (*Walinga, 2008*). This innate uncontrollability is an essential part of the change process as it underlies the appraisals of control and power and alarms the individual about the ego-threat that the crisis poses to the system and, thereby, the self.
- Avoid succumbing to fear (*Kotter, 2008*) and the concomitant chaotic uncertainty that characterizes a crisis. Essentially, the acceptance of an urgent crisis reduces the levels of structure and order and, therefore, calls the leader and the company to dive into the unknown and engage in a sense making process, through which the new paradigm will eventually emerge (*Burnes, 2004b*). Fear of this unknown needs to be controlled, as it is one of the main factors that could hold the leader entrapped in a fallacious commitment to an inadequate status quo (*Armenakis, Harris & Field, 2000*).
- Managing and dealing with the blame that has been assigned to the self from internalizing causal responsibility. While supplementary to the points raised above, it is still crucial, since unregulated blame might lead to disastrous results for the self and, thus, the company (*Smith & McElwee, 2011*).

In order to understand how the leader could cope with these challenges, the researcher reflected on the different types of hope (*i.e. Webb, 2007*) that could be elicited by various appraising outcomes. Generally speaking, the results of the analysis demonstrated that hope can be either adaptive or maladaptive, depending on how the appraisals of control and power shape its element of agency (*Snyder, 2002*). In the former case (*high control and high power*), hope facilitates the individual to let go of the old, cope with the emotional challenge at hand and, finally, dive into the uncertainty of the new reality (*Folkman, 2013*). As a result, the leader is able to conceive the potential of an alternative course of action that is achievable through the collective efforts of the organization and, therefore, instigates the change process (*Democratic*

hope). Instead, hope as a maladaptive emotion (*low control and/or power*) enables leaders to retain their commitment to a problematic status quo (*Lazarus, 1999b*). It does so by promoting the imaginary construction of alternative pathways that could be followed through the existing course of action under the comforting belief that they would lead to the covetable outcome (*respectively: Transcendental or Heroic hope*).

Finally, *Scherer's (2001)* distinction between control and power offers significant insights for change leadership. To start with, the current thesis agrees with *Sheaffer & Brender-Ilan (2014)* that leaders who accept control over the resolution of the crisis are more likely to formulate adaptive responses to it. This is because, they see the issue at hand as amenable to alteration by human beings and, thus, prepare for undertaking action. On the contrary, externalizing control to uncontrollable realities promotes justification of the current system by giving rise to various rationalizations about why an alternative course of action is destined to fail, and why everything will eventually be fine (*sec. 8.2.2*). Therefore, control over the response is indeed crucial. At the same time though, control should not be equated with the misleading, yet popular, belief that the contemporary challenges can be faced by all-powerful heroic CEOs (*Chia, 2014; Uhl-Bien, Marion & McKelvey, 2007*). Indeed, after reflecting on the distinction between control and power, the thesis argues that the overconcentration of control is more of an ego-defensive response which persuades the self that the disorder from the crisis will be faced only when personal power is restored (*sec. 8.3.2*). Rather, an adaptive response requires that leaders reflect on the assumptions of heroism and accept their inability to control and predict everything (*Knights & McCabe, 2015*). Upon this acceptance, they are expected to abolish fruitless efforts to resolve the crisis on their own and, thus, they will conceptualize leadership as a practice executed by agents who collectively make sense of events (*Mumford, Scott & Hunter, 2006*) and respond to the faced challenges (*Raelin, 2014*).

11.5 Practical implications

As a theoretical piece of work, the current thesis offers some important contributions to practice as well. The map that has been presented in figure 22 constitutes a structured view of the change process (*Scherer, 2009b*), which could be used as a tool to translate observable behaviours and actions (*left side: response to the call for change*) to specific unconscious cognitive and affective processes (*right side: the appraisal process*). Following *Eubanks & Mumford's (2010)* logic, by providing an in depth understanding

of these underlying processes and their links, the researcher hopes to facilitate change agents in their efforts to overcome problems of resistance by the top management. For example, a leader who behaves in an autocratic way (*observable behaviour*) is very likely to face internal power issues (*cognitive & affective processes*), upon which the change agents could take action in order to galvanize change.

It is also possible that change agents are not external individuals but people in lower levels of the organization. From this perspective, the understanding that has been proposed here could further advance theory and practice on how change issues could be sold to top management (*Dutton & Ashford, 1993; Dutton, Ashford, O'Neill & Lawrence, 2001*). Specifically, the structural change process may provide middle managers and lower level employees with the capability of directing CEOs' attention to the issues that matter, without though triggering defensive responses. It might also allow them to elicit novel or alter established narratives and meaning-making processes and, thus, trigger a mind-set change. These qualities are extremely important given that the complex business world of the contemporary era makes the instigation of bottom-up changes a necessary reality that organizations need to widely endorse (*Moon, 2008*). Indeed, as it has been argued throughout the research, new ideas and innovation may be generated and conceptualized at lower levels, in which case the ability of selling issues to the top management becomes essential.

The current thesis entails implications for managerial education too (*Siegal, et al. 1996*). To start with, it demonstrates that business schools need to reflect on their teachings of leadership. Nourishing future leaders' ego will not make a huge difference in a world where a significant number of corporations are led by narcissists that focus mainly on personal gains (*refer to sec. 4.3.2*). Rather, it is time to consider leaders as moral critical thinkers who challenge established norms and co-create, with their employees, alternative and more beneficial organizational realities (*Cunliffe, 2009*). On a more practical note, leadership training could also incorporate the advancements of this work. As *Probert & James (2011)* claim leadership development programs should build upon the opportunities from crisis to challenge established assumptions and alter current schemas about the concept of leadership. Thus, consultants may wish to reflect on the model and promote relevant training to leaders. Finally, it would be advantageous for modules on change management to include the current model in their curriculum. For example, the PowerPoint that has been developed for the needs of the

expert opinion study could be conceptualized into an e-learning module that would drive students through the model. Indeed, making change agents aware of its underlying processes, may lead them to improve their practices on introducing change and, thus, reduce the level of resistance they face (*Ford, Ford, & D'Amelio, 2008*).

11.6 The limitation of lacking empirical validity

Similar to any research the current thesis is by no means free of limitations. In principle, this work was a big challenge for the researcher, given that he has a managerial background and, thus, had little knowledge of the disciplines that have been used in this work. Immediately, questions regarding the appropriate use of complex, and sometimes vaguely defined, constructs such as emotion (*Izard, 2010a*), unconscious mind (*Seebohm, 1992*), dual-process theories (*Evans & Stanovich, 2013*) and ego-threat (*Leary, et al. 2009*), could be raised. In addition, the interdisciplinary approach magnifies the theoretical insecurities. As *Bracken & Oughton (2006)* demonstrate, researchers in interdisciplinary projects have to challenge their assumptions, deconstruct their disciplinary understanding, and, then, work together to create a more complete picture by synthesizing knowledge anew. This means that not only had the researcher to master novel constructs, but also there was the need to make the necessary assumptions that would allow him to cross the disciplinary boundaries without distorting the core of the theories. Therefore, it needs to be acknowledged that while a robust methodological approach has been followed (*chapter 2*), it is possible that the advocated interdisciplinary understanding suffers from biases and misconceptions.

Given these issues, the researcher decided to design and run an expert opinion study that would validate the produced interdisciplinary theorization. Unfortunately, although the process had been carefully designed (*chapter 9*), causes that lie mainly outside the researcher's control made the attempt unsuccessful (*chapter 10*). As a result, the empirical objective of this work (*sec. 1.6.5*) has not been met, and, therefore, questions could be raised regarding the validity of the proposed model. This does not mean that the model should be rejected, given the rigorous process that has been adopted for its development as well as the fact that all of its components are grounded in established research. However, it needs to be accepted that the whole picture still remains to be empirically tested (*see also Thompson & Hunt, 1996*). Commencing from this major limitation, the researcher strongly advocates that future efforts should focus on validating the theory of this thesis. Ideally, a research team, with members from all

the involved disciplines and study fields, would be formed and awarded the necessary funding in order to do so (*app. 6.1*). Critical discussions among researchers on topics for which the available knowledge is imperfect would validate as well as extend the initial theorization. Furthermore, such a research team could include practitioners and change agents from the business world. In this way, theory that is developed in the research lab could be applied into practice and get revised based on the feedback, a dynamic interaction which would narrow the gap between what science knows and what business does (*Marques, 2012*).

11.7 Recommendations for future work

Similar to any new theory (*Imbir, 2016*), the current thesis provides a set of novel propositions that, according to the researcher's view, establish the ground for understanding the process of change instigation. It is acknowledged that the major step after the conclusion of this work is to engage in empirical research for validating the current theorization. At the same time though, a number of opportunities for future research arise at the theoretical level. On this basis, the following sub-sections will provide some suggestions for researchers who want to build upon and expand the understanding that this thesis offers.

11.7.1 Further advance the current theorization

The first type of suggestions refers to research ideas that could further improve the theorization of this work. Given that the current thesis is a pioneer attempt, it is logical that many elements of the interdisciplinary understanding could be further analysed, complemented or expanded. In particular, future research could focus on the following issues.

11.7.1.1 Integrate more ego-defences in the process

The current thesis utilized specific defences and provided a potential explanation regarding their impact on the process of change instigation. However, the field of psychodynamics has discussed more defences than the sub-set that has been examined here. The potential implications of these defences provide an opportunity for fruitful future research (*Brown & Starkey, 2000*).

11.7.1.2 Develop a detailed “ways of coping” scale

The map in figure 22 offers an overview of the behaviours that leaders could adopt as a response to change. However, as *Skinner, et al. (2003)* claim, the specific coping instances can potentially be countless. From this perspective, future work could focus on expanding the map. This could be done theoretically, by appropriating existing coping responses from the literature (*i.e. Vitaliano, Russo, Carr, Maiuro & Becker, 1985*) in the context of change management, or empirically, by engaging in research with companies in which top leaders face compelling evidence.

11.7.1.3 Include the appraisal of future expectancies

The current model depends on the outcome of six evaluative dimensions to determine the fate of the change process. It seems, though, that there is room for at least one more. Specifically, *Haleblian & Rajagopalan (2005)* argue that change initiation is more likely to happen when efficacy is high as well as future expectations are positive. It is true that these two appraisals overlap (*Lazarus, 1991a*), which led to the assumption that if a crisis is recognized and the coping potential is high, then future expectancies are necessarily positive, given that change is the only way. Yet, as it has been proven here, such assumptions are to be challenged, and, thus, further work needs to conceptualize the distinct contributions of future expectations (*Bandura, 2006*) into the change process.

11.7.1.4 Reflect on the field of neuroscience

Organizational neuroscience is an emerging concept that could significantly contribute to the advancement of the current theorization. A closer look at the mechanisms of the brain that underlie the evaluations and generate the subsequent behaviours could offer many insights to the change process. It should be noted, though, that while neuroscience can play an important role in understanding the phenomenon of change, researchers should avoid the fallacy of reducing everything down to neurophysiological processes. Instead, the complex social nature of organizations need to be acknowledged and included in the analysis (*see Healey & Hodgkinson, 2014;2015*).

11.7.1.5 Understand the operation of the ego in its context

The current thesis focuses on a single individual, and more precisely on the CEO, in order to study the instigation of a transformational process. However, the CEO does

not operate in a vacuum. Rather, he/she dynamically interacts with the board of directors and the overall organizational, political, social, cultural and economic environment. Therefore, future research, could investigate how team mental models (*i.e. McNeese, Reddy & Friedenberg, 2014*), various elements at group or organizational level (*Hunter, Tate, Dziewieczynski & Bedell-Avers, 2011*), as well as the overall social and cultural contexts (*Scherer & Brosch, 2009*) influence the establishment of urgency and thus the decision-making process.

11.7.1.6 Consider the operation of the ego from a relative perspective

The main premise of this work is that ego-centric leaders will defend the need for change while the ego-free ones will proceed to action. However, relying solely on this dichotomy in order to understand change instigation can offer a sufficient yet incomplete picture of the issue (*Folger & Salvador, 2008*). For example, *Rosenthal & Pittinsky (2006)* argue that narcissist leaders could potentially engage in transformational leadership as long as their personal interests are served by the aims of the transformation. It might be useful to research these cases and take into consideration any relevant implications.

In sum, the researcher believes that future research along the previous lines would significantly improve the interdisciplinary understanding of this work.

11.7.2 Explain the vulnerability in the appraisals

The identified components of the map (*sec. 4.3.4*) allow the change agent to trace the “vulnerable” appraisal that rationalizes the evidence, but leaves unexplained why this kind of “vulnerability” exists in the first place. On this basis, some interesting questions arise; “why the leader regulates the negative emotionality maladaptively instead of adaptively?”, or “what are the moderators that determine whether the leader will succumb to the ego-threat and, thus, appraise the case defensively?”, or “why the change agent exits the change process at a specific stage-appraisal, instead of another one”? In order to approach these issues, future researchers can follow *Wranik & Scherer’s (2010)* logic and try to identify the “individual change variables”, that is personal traits and characteristics, which underlie the evaluative dimensions of the model (*Cervone, et al., 2008*). As *Hodgkinson & Wright (2002)* claim, the personality of a CEO can play an important role in triggering a defensive response to the need for change. It is suggested, therefore, that if the suitable individual variables are combined

with the logic behind the ego-driven defensiveness, a better understanding of the change process as well as a more advanced tractability of the vulnerable evaluations will be achieved (*Kuppens & Tong, 2010*). Appendix 7 explains how such an analysis could happen by providing a specific example on how expertise can impact on the first stages of the change process.

11.7.3 Develop a toolkit

Traditionally, individual change is considered as a time consuming process, which starts with high energy, turns into despair, and then ends up in the necessary mind-set shift (*Elrod & Tippet, 2002*). As a result, a leader who initially responds defensively could potentially let the old go and proceed to change. Such a response though would have been adaptive, only if the urgent qualities of a crisis did not impose the need to take action as soon as possible (*Kotter, 1996*). On this basis, it is proposed that future work should focus on developing a toolkit that could be used to deal with defensive responses at a very early stage and, thus, accelerate the individual change process. For example, researchers could:

- Adopt tools and practices from the discipline of psychology that could be useful in changing leaders' schemas. For example, in his paper *Padesky (1994)* discusses a set of methods that change agents could adapt and use in order to frame compelling evidence in a less defensive and at the same time more straightforward way.
- Develop a set of creative questions and practices that change agents could use in order to approximate the unconscious mind (*i.e. Ellsworth, 1995*). In this way, change agents may focus their efforts on the specific issues that cause resistance to change.
- Emotionalize tools and approaches that already exist in the literature. For example, *Hodgkinson, Wright & Anderson (2015)* modified the repertory grid technique in a way that it can include not only the cognitive but also the affective elements of a decision maker's strategic knowledge. This reflects a more complete picture of the inner mind and, thus, enables change agents to offer better coaching.

Finally, once the toolkit is developed, researchers could engage in further empirical research. For example, case studies could be run with the aim of validating hypotheses

that derive from the current theoretical framework (*app. 6.1*) as well as the toolkit itself (*Flyvbjerg, 2006*).

11.7.4 Cascading the model to lower levels

Finally, the current thesis has focused exclusively on how leaders' change their mental models in order to face a crisis, yet the suggested theorization has some potential implications for change management at lower levels of the organization. Main overlapping concepts include the following:

- Traditionally change has been perceived as a cognitive shift in the existing organizational paradigm and schemas (*i.e. Johnson, 1990; Labianca, Gray & Brass, 2000; Lau & Woodman, 1995*).
- Researchers have already tried to understand how cognition, affect and behaviour could be integrated under the prism of appraisal theories in order to promote organizational change and deal with resistance (*i.e. Liu & Perrewé, 2005; Smollan, 2006*).
- It has been argued that change leaders need to pay more emphasis on emotional arguments, alongside with the rational ones, if they want to persuade their employees to support change (*Fox & Amichai-Hamburger, 2001*).
- Resistance to change can be caused by threats to the self-concept, or else the ego, of the employees (*Eilam & Shamir, 2005*).

The previous points are core elements of the model that has been developed within the context of this work. In this sense, future research could investigate how the current thesis informs theory and practice of change management at the lower levels of the organization.

12 Concluding remarks

To date, much of change management research assumes that once compelling evidence that indicates the urgent need for a transformation is faced, heroic leaders would immediately raise the necessary levels of awareness and proceed to action. According to this tradition, any problems and hassles concern mainly the lower levels of the organization and, thus, the job of a successful leader is to overcome the resistance from the bottom and bring the employees on board. Despite the importance and applicability of such research, the underlying assumption led the field to pay little attention to cases where compelling needs are established and urgency is raised, yet leaders either totally reject the evidence or avoid instigating change until it is too late. Commencing from this gap in the literature, the current thesis adopted a solo interdisciplinary research approach, which brought together theoretical insights and knowledge from the disciplines and fields of psychology, philosophy, leadership and change, in order to provide a theoretical explanation of the reasons why resistance at the top could potentially occur.

In principle, this work argues that transformational changes are the subsequent outcomes of drastic shifts in leaders' mental models and schemas. If, therefore, instigation of such changes is to be understood, the psychological demands of such shifts need to be captured and explained. More precisely, once a crisis is faced, leaders engage in a dynamic emotional change process during which they appraise the discrepant evidence that indicates the need for change. According to the prevailing norm in change management literature such evaluations should lead to both a realization that change is necessary as well as a desire to take action now in order to protect the organizational interests. However, it seems that the change process is not that straightforward. This is because, the contentious evaluations do not occur solely in reference to the business needs, but they also take into consideration the personal ego-commitments that leaders hold. As a result, while proceeding to change in order to secure the continuation of business seems to be the only logical action, in some cases it is possible to see leaders responding in ways that might go against organizational interests, but do protect the threatened ego.

What the response of a leader will be depends on the motivational attributes that underlie the mechanism of emotion regulation. Specifically, the evaluation of ego-threatening evidence that indicates the existence of a crisis is expected to trigger psychological stress, which will be experienced via negatively charged emotions. Some leaders manage to regulate this emotionality adaptively and, ultimately, take on the personal costs and proceed to change. In some other cases, though, the unconscious mind can intervene and trigger defence mechanisms, which also regulate the emotional experience, yet they do so in favour of the attacked ego. This is considered as maladaptive emotion regulation, which leads to a distorted perception of the faced reality and, consequently, promotes coping responses that are unable to deliver appropriate or adequate actions for dealing with the crisis at hand. Collectively, the elements that were mentioned above construct a dynamic and complicated emotional change process, the underpinning logic and mechanisms of which have been captured and discussed within the scope of this research.

By explaining how individuals subjectively appraise and cope with discrepant evidence, this work opens a new path for understanding how leaders instigate transformational changes. Nevertheless, the current theorization is only the beginning of an interesting, yet highly demanding, journey. Initially, future research is necessary to empirically validate the suggested model and, thus, overcome the main limitation of this thesis. Researchers should also reflect on the offered insights with the aim of enriching and expanding the current understanding. In any case, this work makes an appeal for reconceptualising the established norm of perceiving leaders as all-knowing heroes. It might be that leadership has been a crucial contributor to organizational and societal success. Many companies and systems have flourished under the influential guidance of charismatic individuals who in times of crises led change successfully. At the same time though, it is also true that in many cases oppressive leaders have opposed progress and led their people into troubling conditions. If humanity is ever going to overcome such issues and focus on things that really matter, such as poverty, inequality, advances in technology and science as well as space exploration, it needs to nourish leaders who will value the whole more than their ego. This thesis is the first step towards an understanding of how this could be achieved.

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Appendices

Appendix 1: Operational definitions

This appendix aims to exhibit the definitions of change, organizational change and change management as they were identified in the literature. For every definition there will be a demonstrative table as well as a matrix that links the affinity processes' results with the definitions themselves.

1.1 Change as a term

Both definitions and etymological analysis indicate an approach of two substances for change. On the one hand change could mean alteration of the shape, on the other hand movement to a different state.

The word change comes from the Latin one “*Cambire*” (Skeat, 2005:84), which in its turn has its origin in Proto-Celtic word “*Kamb or Kemb*” (Miller, 2012:155 & 20) or the ancient Greek “*Κάμπτειν*” (Diez, 1864:109; Lehmann, Hewitt, 1986:175), and means crook. On the other hand the Greek work for change “*Αλλάζω*” comes from the ancient Greek word “*Αλλάσω*”, which consists of two part (Patakis & Tzairakis, 1999:38). The first one is “*αλλ-*” which means different (Pagoulatos, Giakos, Katroulikos, 2005:196) and the second one is “*άγω*” which means lead or drive (Patakis & Tzairakis, 1999:10).

Definition	Source
An alteration of the state of any thing	Smith (1918)
To change is to move from the present to the future, from a known state to a relatively unknown state	Harigopal (2006:43)
Change is understood as making the form, nature , content, etc. of something different from what it is or what it would be if left alone	Sambaiah, as cited in Singla (2009:138)
An act or process through which something becomes different	Stevenson (2010)
Change is crooking or bending the shape	Etymology
Change is Leading towards a different direction	Etymology

Definitions of change as a term

Nevertheless, the approaches are complementary and through the affinity diagram they were combined and created a holistic definition:

	Alteration of the state	Moves to a new and relatively unknown state	Desired condition	Is an act or process
Etymology	X	X		-
Smith (1918)	X			-
Harigopal (2006)		X		-
Sambaiah (2009)	X			-
Stevenson (2010)		X		X
Times Mentioned	4	2	1	1

Link between Definitions and Elements derived by the Affinity Process

Change seems to be defined in two different but complementary ways. It is considered as either the process through which something becomes different (*Stevenson, 2010; Sambaiah, cited in Singla, 2009:138*) or a movement towards another state (*Harigopal, 2006:43; Smith, 1918*). Etymological analysis of the word supports the existence of both definitions. On the one hand change means crooking (bending), in the sense of being able to adapt your shape, on the other hand is leading towards a different direction, which constitutes the imperative call for both resilience (*Hornell & Orr, 1997; Stoltz, 2004*) as well as leadership (*Gill, 2002; Stichler, J.F., 2011*) during change. As a result, the following definition will be used:

“Change is an act or process through which an entity “moves” towards a new and relatively unknown altered state”

1.2 Organizational Change

It seems that there is consensus on how organizational change could be defined. Most of the authors support that it is about an alteration of practices and/or behaviors dominating in the organizations’ status quo. At the same time other authors focused on the organization’s movement to a new state which, apparently, includes changes in organization’s status quo as well.

Furthermore, while neither the necessity of OC for organization nor its aim for improvement are not mentioned widely, they have been identified and should be considered as important characteristics as well.

Definition	Source
Change is an any significant alteration in the status quo which is intended to benefit the people involved	<i>Havelock (1973:4)</i>
Change is the modification of, deletion of, or addition to attitudes and behaviours	<i>Lindquist (1978:1)</i>
Change describes everything that needs to be different in organizations	<i>Anderson & Ackerman (2010:51)</i>
Large scale change is a lasting change in the character of an organization that significantly alters its performance	<i>Mohrman, et al. (1989:2)</i>
Change, one type of event, is an empirical observation of difference in form, quality, or state over time in an organizational entity	<i>Van de Ven & Poole (1995)</i>
Organizational change involves moving from the known to the unknown, from the relative certainty to relative uncertainty, from the familiar to the unfamiliar	<i>Cohen, Fink, Gadon & Willits (1995:396)</i>
Change is a deviation from the norm or from the traditional behaviour of a group or organization	<i>Freeman (1999:363)</i>
Change is a reordering or reorganization of aspects of an organization	<i>Davies (2001:12)</i>
Organizational change is new ways of organizing and working	<i>Dawson (2003:16)</i>
Change refers to an ongoing process whereby there is an intention to alter something from a current state to a new state	<i>Basford & Thrope (2004:192)</i>
Change is seen as an ongoing process that unfolds over time, revealing periods of greater and lesser instability, in which the restlessness of a system is an instinctive response toward survival in a continually changing internal or external environment	<i>Ferdig & Ludema (2005)</i>
Change is about aligning people, resources and culture with a shift in organizational direction	<i>Dealy & Thomas (2006:52)</i>
The adoption of an idea or behaviour by an organization	<i>Draft (2005:619)</i>
Planned alterations of organizational components to improve the effectiveness of the organization	<i>Ingols, Cawsey & Deszca (2011:2)</i>

Definitions of organizational change

Defining OC becomes a difficult task, since it varies according to the model someone chooses to approach it (*Kezar, 2001:12*). Most of the definitions agree that OC refers to the alteration of practices and behaviours in an organizations' status quo (*Davies, 2001:12; Dawson, 2003:16; Draft, 2009:619; Freeman, 1999:363; Lindquist, 1978:1; Van de Ven & Poole, 1995*), with the aim of benefiting performance (*Havelock, 1973:4*). Authors have, also, focused on the organizations' movement to a new and

relatively unknown state (Cohen, Fink, Gadon & Wiillits, 1995:396). Dealy and Thomas (2006:52) adds that this movement requires alignment of resources and culture, while Ferdig & Ludena (2005) stresses its crucial contribution to business survival.

	Alteration of practices and behaviours	Aims for improvement	It is a necessity	In a changing Environment	Moves to a new and relatively unknown state	Alignment of culture and resources	Is an ongoing process	It is unstable
Havelock (1973)	X	X						
Lindquist (1978)	X							
General view before 80s			X					
Mohrman, et al. (1989)	X	X						
Van de Ven & Poole (1995)	X							
Cohen, Fink, Gadon & Wiillits (1995)					X			
Freeman (1999)	X							
Davies (2001)	X							
Dawson (2003)	X							
Basford & Thrope (2004)					X		X	
Ferdig & Ludema (2005)			X	X			X	X
Dealy & Thomas (2006)					X	X		
Draft (2009)	X							
Ingols, Cawsey & Deszca (2011)	X	X						
Times Mentioned	9	3	2	1	3	1	2	1

Link between OC Definitions and Elements derived by the Affinity Process

As a result, through the affinity process these different but complementary approaches to define organizational change where combined and produced the following definition:

“Organizational change is an ongoing and necessary process, of altering organizational practices and behaviours with the aim of achieving a new improved state of performance”

1.3 Change Management

In general CM deals with the facilitation of change in individual, team and organizational level. It has a proactive and structured character and aims to gain benefits for the company and its employees.

Human resource management has been emphasized as one of the CM's priorities during the change process. This clearly depicts the fundamental role that people play during change.

Definition	Source
The management of change and development within a business or similar organization.	<i>Stevenson (2010)</i>
"The coordination of a structured period of transition from situation A to situation B in order to achieve lasting change within an organization"	<i>BNET as cited in Ljungblom, Isaksson & Hallencreutz (2012)</i>
It is the visualisation, planning, and implementation of transitions throughout an organization or business until, via innovative management practices	<i>Hiam (1997)</i>
All measures concerned with the initiation and the realization of new strategies, structures, systems, and modes of behaviour, are subsumed under the term change management	<i>Gattermeyer & Ayad (2001) as cited in Finke & Will (2003:69)</i>
For an organization change management means defining and implementing procedures and or technologies to deal with changes in the business environment and to profit from changing opportunities	<i>Kotska & Monch (2002) as cited in Schwerdtzsch & Alonso (2003:24)</i>
Change management is about managing people in a changing environment so that business change are successful and the desired business results are realized	<i>Hiatt & Creasey (2003)</i>
Change Management is a systematic approach to dealing with change from the perspective of an organization and at the individual level.	<i>Schweditsch & Alonso (2004)</i>
Change management means the process of helping a person, group, or organization change	<i>Rothwell & Sullivan (2005)</i>
Change Management is the proactive identification and management of modifications to your project	<i>Baca (2005)</i>
The process, tools and techniques to manage the people-side of change processes, to achieve the required outcomes, and to realize the change effectively within the individual change agent, the inner team, and the wider system	<i>Nauheimer (2006) as cited in Feldman (2008:104) / Atkin & Brooks (2009)</i>

Change management is an organized, systematic application of the knowledge, tools, and resources of change that provides organizations with a key process to achieve goals and objectives	<i>McManus (2006) / Mohapatra & Singh (2012)</i>
Organizational change management is the process needed to enable the people in an organization to transition from their current environment and adopt the new work environment or desired state	<i>Tuncer (2007) as cited in Hallencreutz, Turner & Garvare (2012)</i>
Change management is a systematic approach to dealing with change from the very beginning of a change program and during all planning and implementation stages.	<i>The World Bank (2008)</i>
The process through which a proposed change is effected, is treated as the management of change	<i>Sambaiah (2009)</i>
Change management is a structured, proactive, coordinated approach to transition individuals and organizations from a current state to a desired future state to achieve lasting change	<i>Ensaola & Atchley (2011)</i>
Change management is a structured approach to transitioning individuals, teams, and organizations from a current state to a desired future state.	<i>Rathbone (2011) / Hill (2011) / VanZant-Stern (2011)</i>
Change management is the process of planning and coordinating the implementation of all changes through individuals, teams and organizations	<i>Malek & Yazdanifard (2012)</i>
Change management is a set of processes, tools and mechanisms that are designed to make sure that when you do try to make some changes, A, it doesn't get out of control and B, the number of problems associated with it doesn't happen	<i>Kotter (2012b)</i>

Definitions of change management

In its broad sense, CM is an ongoing (The World Bank, 2008:169), proactive (Baca, 2005:2) and systematic approach or process (Malek & Yazdanifard, 2012:149; Singla, 2009:138) for managing, developing and dealing with change (Stevenson, 2010; Schweditsch, Alonso, 2004:24). As Rothwell & Sullivan (2005:17) have supported CM generally aims to facilitate change at individual, team and organizational levels. Also, plenty of authors have supported that CM is about managing the transitions from the current to a desired future state (Hill, 2011:67; Rathbone, 2012:1; VanZant-Stern, 2011:168). Transitions should create, via innovative management practices (Hiam, 1997:8), lasting change and positive results for benefiting both the organization (Ljungblom, Isaksson & Hallencreutz, 2012) and its people (Ensaola & Atchley, 2011:53).

	Utilizes management practices and organizational resources	Is a process	Is ongoing	Facilitates the transition from a current state to a new state	Is proactive and organized	Applying, managing & facilitating change	Applies to individuals, teams or organizations	Reduce failure chances	Lasting and sustainable results	Successful and realized results
<i>Stevenson (2010)</i>						X	X			
BNET Business Dictionary				X					X	
Hiam (1997)	X			X			X			
Gattermeyer & Ayad (2001)	X					X				
Kotska & Monch (2002)	X					X	X			X
Hiatt & Creasey (2003)	X					X				X
Schweditsch & Alonso (2004)					X	X	X			
Rothwell & Sullivan (2005)		X				X	X			
Baca (2005)					X	X				
Nauheimer (2006) / Atkin & Brooks (2009)	X	X				X	X			X
McManus (2006) / Mohapatra & Singh (2012)	X				X	X				X
Tuncer (2007)		X		X			X			
The World Bank (2008)			X		X	X				
Sambaiah (2009)		X				X				
Ensaola & Atchley (2011)				X	X		X		X	
Rathbone (2011) / Hill (2011) / VanZant-Stern (2011)				X	X		X			
Malek & Yazdanifard (2012)		X				X	X			
Kotter (2012b)		X				X		X		
Times mentioned	5	6	1	5	6	13	10	1	2	4

Link between CM Definitions and Elements derived by the Affinity Process

As a result, through the affinity process these different but complementary approaches to define change management were combined and produced the following definition:

“Change Management is a proactive and structured approach for facilitating a person, group and/or organization to change and achieve the desired outcomes”

Appendix 2: Planned change models' analysis

This appendix aims to present the steps, which were followed to analyse the PC models (table 2). The main approach was to break down the different steps of the models and then synthesize them again by starting from a common basis.

The first step was to capture the most important phrases in each model and isolate them. For that reason, the coding process were followed. The results are depicted on the following table:

Model	Phrase
Lewin's 3 step model	Felt Need
	Unfreeze
The Phases of planned change	Translate difficulties into problem awareness
	Desire to change
	Desire to seek help from outside the system
	Ambivalent about the need
	Problem awareness is not automatically translated into a desire for change
The organizational change process	Unfreezing
	Translate symptoms into a coherent picture
Dynamic Seven-stage model	Sort out the developmental problem
	Sense of the problem
A model for OD	Manager's perception that the organization is somehow in a state of disequilibrium or needs improvement
	Only felt needs convince individuals to adopt new ways
Beckhard & Harris Change model	A good diagnosis of a set of conditions causing a need for change
The CAP	Ensuring that employees around the organization understand the reason for change
Enhanced Planning Model	Begins with the awareness of a need or a problem
10 Commandments for change	Analyse the organization and its need for change
	Crisis facilitate change's initiation
	Generate a sense of urgency
The critical Path to Change	Clearly define business problems
United Model for OD	Disagreements about the need for change surface
	Understanding Organizational problems
	Gathering analysing and feeding back information to managers and employees
Kotter 8 Step	Eliminate complacency
	Establish a sense of urgency

	Change start more easily with a crisis (natural or not)
The change management process model	Establish the need to change
A process model to change	Recognition that circumstances require change to take place
	Translate the need for change into a desire for change
A framework for change 7-steps to Change	Highlight the idea for what needs to be changed
	Clear definition of the business problem
	Change won't happen without urgency
Leading Change model	We have to do this- like it or not
	Leaders must focus on creating a sense of urgency
	Highlighting the awareness about the need to move in a new direction
C.H.A.N.G.E. The ICEBERG approach	Unfreeze the perception that the status quo is adequate to meet the challenges of the present and future
	Identifies a Need for change
	A diagnosis of the current state
A framework for change management	Using a compelling reason
	Illustrate the need in a dramatic way
The action Research model Steps for Leading & Managing Change	Awareness of a Need for Change
	Use tangible - dramatic evidence
	Breed anxiety / uncertainty
Recipe for Strategic Change	Establish Urgency for the true current position

Coding Results for Change Models

The focus was on identifying phrases referring to the initiation of a PC program and this objective guided the coding process. After the phrases had been isolated, the affinity process were used to group them back. The specific approach enabled to create the group-elements and not stick the phrases under already developed groups (*see: Cowley and Domb, 1997:170*). That is to say, the group elements emerged from the phrases and arguably represent a holistic concept of the proposed initial steps developed in the PC literature. Lastly, the elements were linked with the models for enabling further analysis (*table 3*).

Element	Phrase
Identifying the Compelling Need	Felt Need
	Manager's perception that the organization is somehow in a state of disequilibrium or needs improvement
	Sense of the problem
	Only felt needs convince individuals to adopt new ways

	Begins with the awareness of a need or a problem
	Identifies a Need for change
	Recognition that circumstances require change to take place
Diagnosing & analysing the Compelling Need	Maps out what needs to happen
	Clear definition of the business problem
	Understanding Organizational problems
	Translate symptoms into a coherent picture
	Identify the subparts of the system where the problem is located
	Sort out the developmental problem
	A good diagnosis of a set of conditions causing a need for change
	Clearly define business problems
	A diagnosis of the current state
Disseminate the Compelling Need & Increase Awareness	Awareness of a Need for Change
	Establish the need to change
	Translate difficulties into problem awareness
	Highlighting the awareness about the need to move in a new direction
	Ensuring that employees around the organization understand the reason for change
Infuse & Establish Urgency	Gathering analysing and feeding back information to managers and
	Shocking the members with a statement or action that creates anxiety
	Establish a sense of urgency
	Generate a sense of urgency
	Change won't happen without urgency
	Establish Urgency for the true current position
	Leaders must focus on creating a sense of urgency
Unfreeze - Eliminate Inertia	Using a compelling reason "to increase urgency"
	Eliminate complacency
	"Unfreeze"
	Break the status quo
Sense of Need	Unfreeze the perception that the status quo is adequate to meet the challenges of the present and future
	Disagreements about the need for change surface
Requires Desire for change	Ambivalent about the need
	Problem awareness is not automatically translated into a desire for change
	Desire to change
	Desire to seek help from outside the system
Enforcing the Compelling Need	Translate the need for change into a desire for change
	Illustrate the need in a dramatic way
	We have to do this - like it or not
	Crisis facilitate change's initiation
	Change start more easily with a crisis (natural or not)
	Use tangible - dramatic evidence
	Breed anxiety / uncertainty

Affinity Process Results for Change Model

Appendix 3: Examples of need's legitimization

The following paragraphs aim to demonstrate an example which will clarify the distinction, discussed in section 3.1.2, between the world views of an objectivist and a subjectivist concerning the legitimization of the need for change. It should be noted that the example doesn't indicate a need for a transformational change, which is the area of this work's concern. On the contrary, it was purposely designed to be simple since its main aim is to explain in the best possible way the distinction. Initially, the reader has to imagine the following scene:

- Manufacturing process: A plastic sheet is placed on a vacuum thermoforming machine. The machine warms the plastic and a mould gives the necessary shape to the sheet. Then a fan cools the plastic sheet which, according to the targets established by the management, has to be taken off after "t" minutes.
- Discrepancy: The time-target most of the times is not met.
- Explanation (Operator) – Need for change: The plastic sheet is too hot, so the operator has to wait $t+2$ minutes in order to take it off the machine.
- Counter explanation (CEO) – No need for change: There is no problem with the process. The operator is unproductive because he/she doesn't try enough.

The need for changing the process is legitimized when the explanation provided by the operator is validated. The operator's perception is validated in the following two ways:

- Objectivist perspective (Plato): A thermometer will be used and the results will be compared with a scientific scale which establishes, in an absolute sense, what temperatures the human body-skin can stand. The numerical evidence (*temperature*), compared with the established by the scientists absolute, has the power to legitimize the need for change, regardless of what the operator and the CEO believe.
- Subjectivist perspective (Protagoras): Let's assume that there are two people in the organization who have used the machine, which makes a sum, including the CEO, of three people. If both of them (*majority: 2 out of 3*) say that it is hot and this is the reason why the time-targets are not met, the need for change is immediately legitimized and any other explanation is a product of defence. In this case, it doesn't matter what the actual temperature really is.

The previous examples refer to the legitimization of a need according to the two extremes of the subjectivist-objectivist spectrum. The reader has to moderate appropriately his/her thinking according to the philosophical assumptions that he/she holds. For example, if the temperature of the plastic sheet is around 34°C, when the scientific standard is 35°C (*hypothetically speaking*), but the majority suggests that it is indeed hot, then the need for change is legitimized, because the observed numerical difference can simply be natural variation (*for further analysis regarding statistical process control rules refer to Wheeler & Chambers, 1990:96*).

Appendix 4: The components of emotion

This appendix aims to present the emotional components that have been identified in the literature. As it has been stated in the main body of this work, *Scherer's (2005a)* list seems to be the most complete one. However, it was deemed essential to present additional lists, which have been recommended by various authors, so that the reader can have a more complete view of the componential approach.

Author (Reference)	Component	Description
<i>Kleinginna & Kleinginna (1981)</i>	Cognitive	Generate cognitive processes
	Feeling	Feelings of arousal and affect
	Physiological	Activate physiological adjustments to the arousing conditions
	Behavioural	Lead to behaviour
<i>Buck, (1989); Gross & Barrett (2011); Kring & Gordon (1998) (*widely accepted components)</i>	Subjective Experience	Subjective felt responses (to stimuli)
	Expressive behaviour	E.g. Facial, bodily, verbal - Reflects the extent to which individuals outwardly display their emotions
	Peripheral physiological responses	E.g., heart rate, respiration
<i>Ben-Ze'ev (2001:49)</i>	Cognitive	Supplies the requires information about a given situation
	Evaluative	People are not moved by things but the views which they take of them
	Motivational	Refers to the desire or readiness to maintain or change present past or future circumstances
	Feeling	Awareness of tactile qualities, bodily sensations, emotion, moods
<i>Scherer (2005a)</i>	Cognitive component	Evaluation of objects and events ----->Information processing
	Neurophysiological component	System regulation ----> Support
	Motivational component	Preparation and direction of action -----> Executive

	Motor expression component	Communication of reaction and behavioural intention -----> Action
	Subjective feeling component	Monitoring of internal state and organism– environment interaction -----> Monitor
<i>Fontaine, Scherer, Roesch & Ellsworth, (2007)</i>	Appraisal of events	<i>Similar to Scherer (2005a)</i>
	Psycho-physiological changes	
	Motor expressions	
	Action tendencies	
	Subjective experiences	
	Emotion regulation	Control of the emotional expressions *hidden behind more general components in Scherer's theory Frijda (2007b)
<i>Moors (2009)</i>	Cognitive	Stimulus appraisal/ evaluation
	Somatic	Consisting of central and peripheral physiological responses
	Motivational	Action tendencies or states of action readiness
	Motor	Consisting of expressive behaviour
	Feeling	Referring to emotional experience
<i>Wierzbicka (2010)</i>	Thinking	Someone thinks something at some time
	Feeling	Because of this, this someone feels something for some time
	Bodily Happening	Something is happening somewhere in this someone's body because of this
<i>Durand & Barlow (2010:60)</i>	Behaviour	Basis patterns of emotional behaviour (freeze, escape, approach, attack)
	Physiology	Emotion is a brain function involving the more primitive brain areas
	Cognitive	Appraisal, attribution and other ways of processing the world around you that are fundamental to emotional experience

Emotional components identified in the literature

The list is by no means exhaustive. However, it represents a diachronic perspective on the componential notion of emotions. It starts with the review conducted by *Kleinginna & Kleinginna (1981)*, then moves to the general accepted components which were developed in late 80s (*Buck, 1989*) and remain till our days influential (*Gross & Barrett,*

2011), and concludes by considering theories of the last decade. Despite the differences concerning the expression of the components, it is clear that there is an overlap between *Scherer (2005a)* and the rest of the theories.

Components suggested by <i>Scherer (2005a)</i>	Cognitive component (Appraisal)	Neurophysiological component (Somatic)	Motivational component (Action tendencies)	Motor expression component (i.e. Facial and Vocal expression)	Subjective feeling component (emotional experience)
Kleinginna & Kleinginna (1981)	X	X	X	X	X
<i>Buck, (1989); Gross & Barrett (2011); Kring & Gordon (1998)</i> *widely accepted basic components		X		X	X
<i>Ben-Ze'ev (2001:49)</i>	X		X		X
<i>Fontaine, Scherer, Roesch & Ellsworth, (2007)</i>	X	X	X	X	X
<i>Moors (2009)</i>	X	X	X	X	X
<i>Wierzbicka (2010)</i>	X	X			X
<i>Durand & Barlow (2010:60)</i>	X	X		X	

Matrix analysis with additional component theories

Therefore, *Scherer's (2005a)* list seems appropriate to be used as the guiding list for this work, since it successfully represents other componential theories.

Appendix 5: Research methodology for the interdisciplinary research

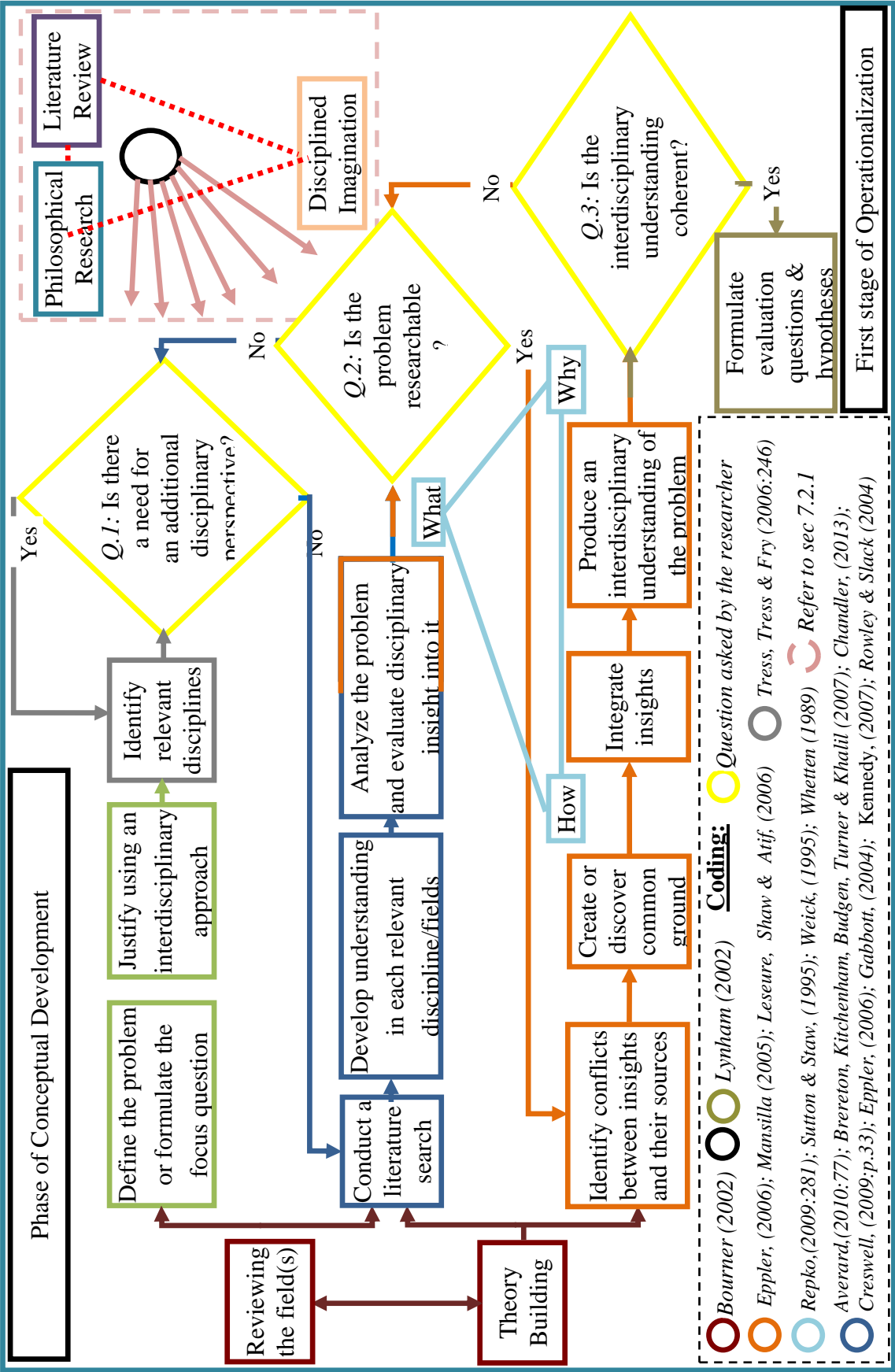
This appendix sets out to go into detail regarding the research methodology of this work. It supports the chapter of methodological design (*ch.2*) by providing evidence which complement it, so that the reader could understand the logic that guided the research in greater depth.

The specific part of this appendix aims to present the logic behind the steps of the interdisciplinary research (*figure below*) in detail. It works as a complementary for section 2.3.

5.1 Identifying relevant steps + Q.1: Is there a need for an additional disciplinary perspective?

The processes of choosing which disciplinary perspectives are necessary to be involved in this research, was a dynamic one. That is, while the work was proceeding new sub-disciplines came to play important role. This logic is graphically illustrated by the link between the questions 1 “Is there a need for an additional disciplinary perspective?” and 2 “Is the problem researchable?”. More precisely, Q.1 was unimportant immediately after the selection of the first three fields of study. However, once the researcher started analysing the problem based on the initial disciplinary perspectives he came up against Q.2, something that changed the importance of Q.1. More precisely, a negative answer to Q.2, which leads to Q.1, made the later, to raise the following dilemma “Is the problem un-researchable due the need for additional studying under the already chosen (sub)disciplines and fields of study or there is a need for an additional (sub)disciplinary perspective. This cyclical process, in which disciplines were added in order to fill gaps of understanding, took place several times and led to an expansion of the research scope.

The following presents the logic behind the selection of each discipline. The analysis is focusing on the sub-disciplines and fields of study for deeper analysis. It should be noted that there are disciplines which are not explicitly referred in the thesis but underpinned its logic (*Philosophy-phenomenology*) and played an important role in the development of the interdisciplinary understanding.



The process of interdisciplinary research

The list of disciplines and fields of study is depicted below:

- Leadership, Change Management (Business) & Cognitive Psychology (Psychology): These first three sub-disciplines were chosen based on the research question as well as the experience of the researcher and his supervisor with the problem itself (*Tress, Tress & Fry, 2006:246*). The logic behind their choice could be captured in the following sentence. It was clear that “cognitive disorders” which make “leaders” resisting “change” exist (*q.v. ch.1*).
- Psychology of emotion - Appraisal theory (Psychology): The pure cognitive approach (*Axelrod, 1973*) was essential in establishing the basic logic, yet insufficient to determine specific aspects of the change process. Consistent with *Marinier, Laird & Lewis (2009)*, questions like, “What information proceed to conscious level?”, “Why someone choose to modify schemas instead of assimilate discrepant information?” or “how new understanding is built?”, emerged. Appraisal theories seemed suitable for clarifying the abstract cognitive model (*q.v. ch.3*).
- Deep Psychology & Dual - Processes Theory (Psychology): The inclusion of the appraisal theories developed the need for a deeper understanding of the unconscious mind. Therefore, apart from the cognitive perspective on the unconscious, it was necessary to review the field of deep psychology (*i.e. Lazarus, 1995b*). In addition, dual processes theory (*System 1 – System 2*) played a role in understanding the distinction between conscious and unconscious mind (*q.v. ch.6*).
- Various Philosophical Schools & Epistemology (Philosophy): The philosophical aspect of this work was clear since its incipience. Questions like, “What is subjectivity and what are the relations between subject and object?”, couldn’t be approached solely on a psychological basis. Therefore, philosophical schools and epistemological considerations (*i.e. constructivism*) has been integrated in the work (*q.v. ch.6*).

5.2 Conduct a literature search

The main aim at this stage was to reach the right literature by using the appropriate key words. The following table demonstrates the main key words that were used.

Main Category	Key Words		
Leadership & Management theories	Change	Desire, Types, Need, Models, Barriers, Transformational, Planned, Individual, Resistance, Organization	Urgency, Crisis, Compelling evidence, Chaos, Uncertainty
	Leader	Management, Mind-set	Strategic
Cognitive theories	Psychology	Cognition, Cognitive frames, Inertia	
	Schema	Subjectivity, Model, Information Processing, Mental Models, Change, Discrepancy	
	Assimilation-Accommodation	Rationalization	Attention, Interpretation
	Psychological Disengagement	Disidentification	Self-esteem, Dissonance, Stigma
	Discounting	Self-esteem, Stigma, Competition	
Cognitive theories + Depth psychology	Defensive	Trivialization, ,	Blame attribution, responsibility
		Procrastination	Delay, Greif, Escalation of commitment
		Self-serving bias	Blame, responsibility
		Control Compensation	Order, controllability, Autonomy
		Reactance	Power allocation, Change, Democracy
Motivation	Goals	Goals in Business schools' studies	Conscious/ Unconscious Illusion/ Deception
Emotion	Define	Component, Process	
	Emotion Regulation	Unconscious Implicit /Explicit Automatic/ Deliberate	Motivation
	Surprise	Cognitive-psychoevolutionary model	Interruption
	Hope	Modes, Types	Efficacy, agency, Passive/ active
	Core affect	valence	Macro/ Micro

Appraisal theories	Appraisal	Search on specific appraisals	
	Appraisal Unconscious	Intuitive, Automatic, Reflective, Attributions	
		Defence mechanism,	Preconscious - Unconscious
	Coping	Adaptive/ maladaptive Defensive	Emotion/ Problem focused
		Action tendency	
	System 1 / System 2 (Dual theories)	Affective/ Cognitive Fast/ Slow Associative/ Rule based Intuitive/ Reflective	Various dichotomies (<i>table 15</i>)
	Ontology	Objectivist/ Subjectivist Plato/Protagoras	Absolutism/ Relativism
Philosophy	Epistemology	Positivism/ Constructivism/ Evaluativism	Elite/ Majority (Truth establishment)
	Free Will	Illusion Conscious/ Unconscious	Affect, Reflection Emotional impulse
	Objectification	Reflection, Response inhibition	Regulation of emotion
	George & Jones (2001)	Citation analysis & Use of key words from the paper	
Crucial theories	Axelrod (1973)	Citation analysis & Use of key words from the paper	
	Scherer (2005a; 2001)		
	Lazarus (1991a;1995a)		
	Alicke (2000)		
	Simon, Greenberg & Brehm (1995)		
	Steel (2007; 2010)		
	Walinga (2008)		
	Kay & colleagues (2008; 2009; 2010)		

List of main Key words

The list is by no means exhaustive, yet it is a good indicator of the main key words that were used in this work. In addition, it should be noted that due to the integrative nature of the review, combinations of key words that belong in different categories/sub-disciplines, took place. Lastly, the theories listed in the table played important role as well. For each of these theories, after their thorough review, the researcher was conducting citation analysis by using key words deriving from the paper itself. This was leading to new searches for relevant literature (*new blue cycle fig.8*).

5.3 Develop understanding in each relevant discipline and field of study

When studies reached this stage, were going through a thorough review with the aim of contributing to the sub-disciplinary understanding. The acceptance of a study's arguments was based on the following criteria.

Criterion	Questions
Provenance	What is the author's credibility? Are arguments of the study based on evidence (i.e. reference list or empirical evidence) or are they the outcome of author's experience?
Objectivity	Is there an equal consideration of opposing evidence or does the paper present a one-sided view? Did the researcher(s) followed a robust research approach?
Persuasiveness	Are the author's arguments and conclusions convincing? Which of them are most/least convincing? How did the author come to such conclusions?
Value	Does the work contribute to the understanding of the interdisciplinary problem at hand and the field in general?

Criteria for evaluating a study (*Based on University of California, Santa Cruz, 2013*)

While the previous criteria was used to evaluate any type of study, in this work specific theories have been utilized (*i.e. Axelrod, 1973; Scherer, 2001*). Therefore, it was necessary to use specific rules in order to decide which theories should be used. The following table presents the criteria.

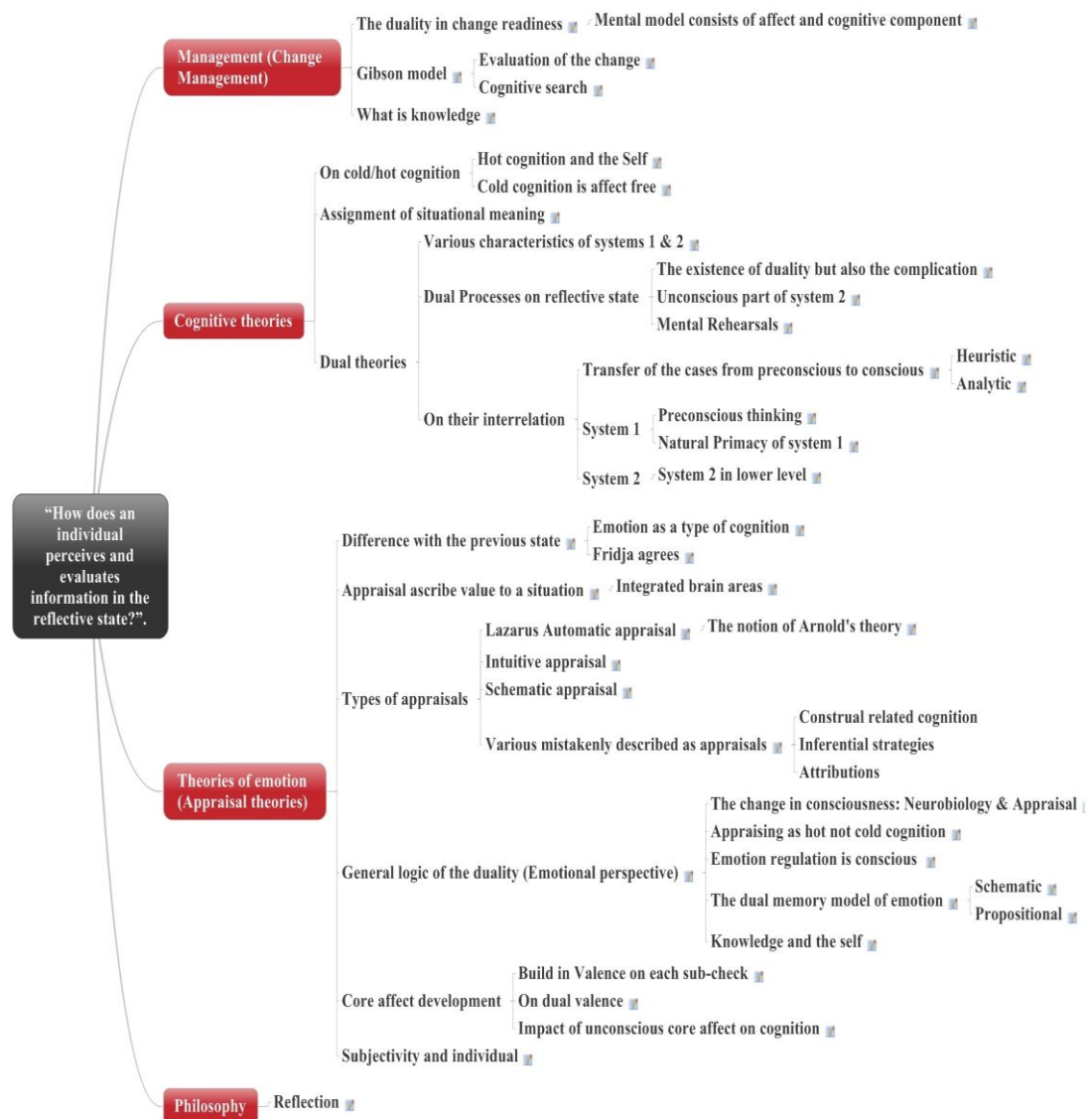
Criterion	Questions
Reliability	Is the theory reliable? Has the theory been tested empirically? Can it be trusted? Has it been recommended by other authors?
Convenience	Is there available knowledge regarding the theory? Does the theory contribute to the understanding of the problem? What is its implications?
Established Status	Has the theory been used in the field? If yes, to what extent? How many times has it been cited?

Criteria for assessing theories (*Based on Stahl, B. C., Al-Amri, J., & colleagues 2008*)

5.4 Analyse the problem and evaluate disciplinary insight into it

Mind maps were utilized for noting down and structuring into categories important arguments and ideas. The dynamic use of mind maps is illustrated in the following example. More precisely, the example consists of a series of steps that led to the argument of the duality at sec. 6.1

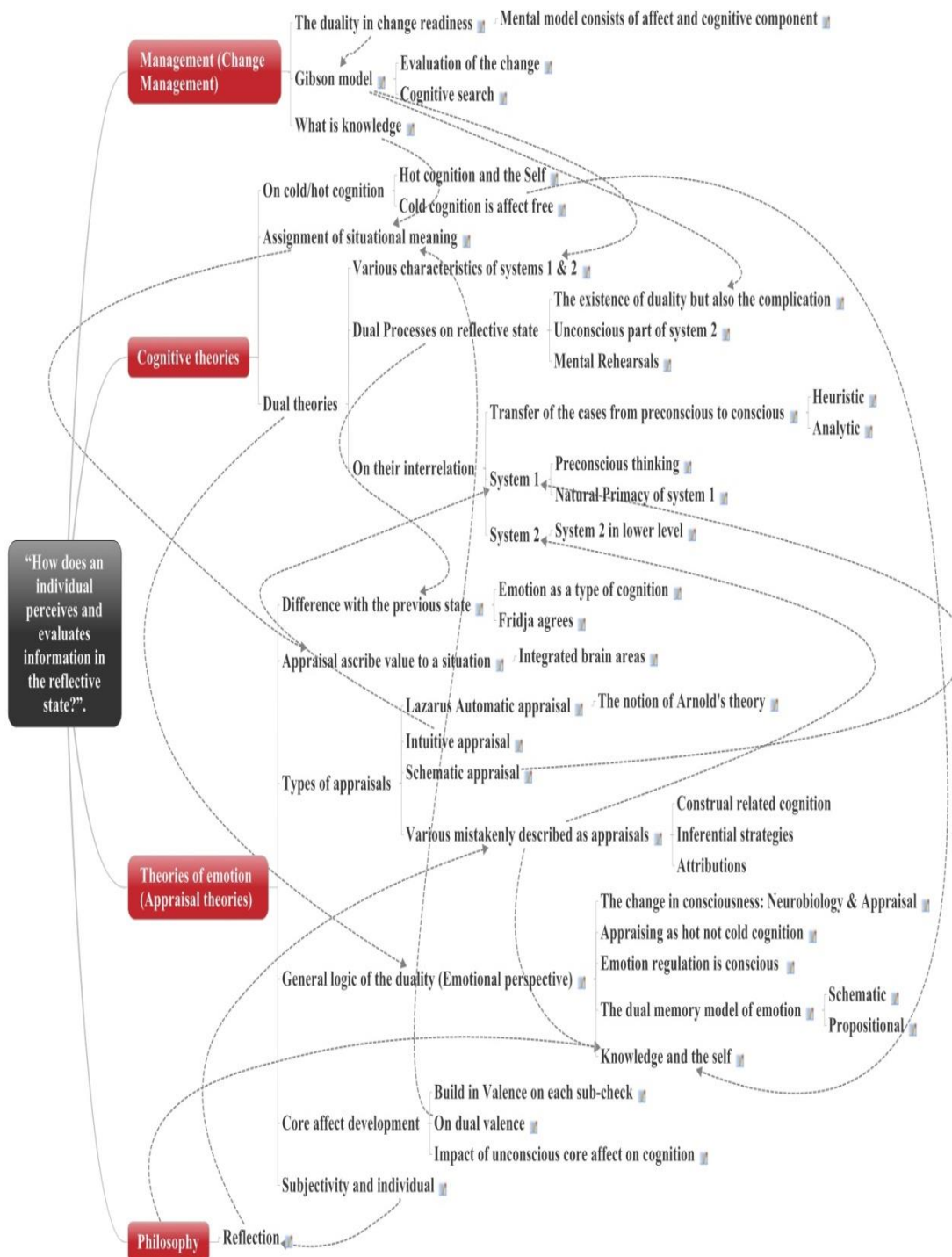
The very first step was to have a sub-question in mind, which in the specific case was “How does an individual perceives and evaluates information in the reflective state?”. The boxes describe the disciplinary contribution to the question. In addition, each box is accompanied by specific notes which expand and clarify its concept. Once the researcher was satisfied with the disciplinary level of analysis the research was ready to proceed to the next phase.



Disciplinary contributions to the question

5.5 Identify conflicts & discover or create common ground

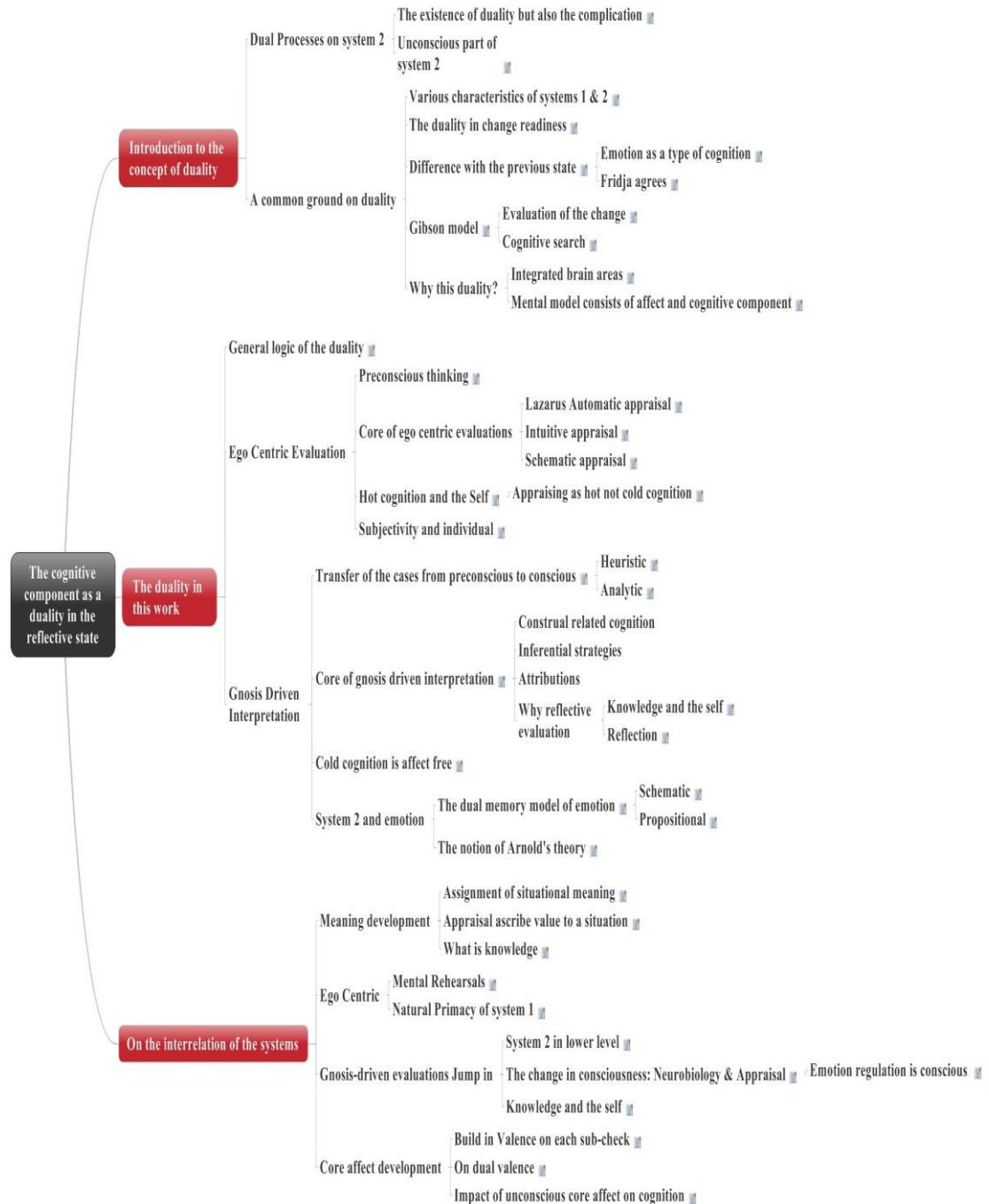
At this stage the disciplinary contribution depicted in the previous map were analysed and their links were captured. The process included to understand differences and seek for common ground. The result was to draw lines between the boxes in the mind-map, which, was now ready to create a new interdisciplinary understanding of the question.



Links between disciplinary contributions

5.6 Integrate insights & produce an interdisciplinary understanding of the problem

Once common ground was achieved the map was reconceptualised in its interdisciplinary form. That is, the logic behind the links has been explicitly analysed and a formal structure has been developed (*the following map corresponds to sec. 6.1*).



Interdisciplinary understanding of cognitive duality in the reflective state

Note that conceptual diagrams have also been used at this stage. For the diagram that corresponds to this mind-map conceptual diagram please refer to fig.18.

5.7 Evaluate the interdisciplinary theoretical construct

The table below presents the evaluative criteria that were used in order to verify whether the proposed theorization was able to meet the requirements of a well-constructed theory. The suggested criteria were developed based on the modification and combination of already existing theories (*right columns of the table*), a process that

took place under the general logic of developing something that will reflect the special needs of the current work. Before proceeding to any further details on this construction process, it is essential to provide the basic principles behind the colour-coding of the table:

- Green cells include criteria that were directly contributed to the construction process
- Yellow cells include criteria that supported, yet not directly contributed to, the creation of the proposed list
- Red cells indicate criteria not suitable for the needs of this work
- Red-coloured words indicate the most important part of a criterion

In principle, the criteria of *Lincoln & Lynham (2011)* which have been developed, in contrast to the positivistic approach of *Patterson (1986)*, in order to address the need of assessing a theory that has been conceptualized under the a interpretivistic paradigm, were utilized as a basis. At the same time, influences from the abductive reasoning that was followed within the scope of this work (*criteria for pragmatism in Jayanti, 2011*), the intention to develop mainly a formal theory (*Brookfield, 1992*), as well as a set of specific criteria for assessing the conceptualization phase of theory development (*Dubin, 1978*) were taken into consideration. All these along with the very interdisciplinary nature of the suggested understanding (*Repko, 2006*) led to the development of ten criteria that are listed below.

Criteria used in this work		Criteria from the literature- Building blogs		
1. Importance & Meaningfulness	A theory is important, or else significant, when it is related to (<i>Patterson, 1986</i>), as well as provides scientific explanation (<i>Mansilla, 2005</i>) and deep understanding of (<i>Lincoln & Lynham, 2011</i>), "actual" events, behaviours and general phenomena that concern social life.	Meaningfulness & understand-ability	.. provide explanation and deep understanding of actual events, behaviours, or the meaning-making activities of stakeholders and respondents; be accepted by professionals and stakeholders (co-constructors of the theory)	Lincoln & Lynham (2011)
		Disciplinary grounding	Deeply informed by disciplinary expertise	Mansilla (2005)
		Importance	... not be trivial but significant, and have some relevance to life or real behaviour	Patterson (1986)
		Discreteness	.. a body of theoretical ideas is seen to refer to a phenomenon that is discrete, distinct, and separate; that is, one which stands apart as not being susceptible to explanation through any other existing theoretical framework	Brookfield (1992)
2. Logically consistent insightfulness	The "traditional" inductive and deductive reasoning to theory development were complemented by abductive logic, which allowed imaginary creativity to emerge and formulate new theoretical interdisciplinary constructs (<i>pragmatism: Jayanti, 2011</i>) of higher and leveraged understanding (<i>Mansilla, 2005</i>). These constructs need to be insightful and can accommodate "some" ambiguity (<i>Lincoln & Lynham, 2011</i>), without, though, losing internal consistency	Thick description and insightfulness be understandable and insightful; exhibit reasonable structural corroboration (be internally and contextually consistent); accommodate some ambiguity (a hallmark characteristic of human affairs) inherent in the sense and meaning-making and socially constructed activities of respondents and stakeholders	Lincoln & Lynham (2011)
		Integrating leverage	In interdisciplinary work, disciplinary perspectives are not merely juxtaposed. Rather they actively inform one another, thereby leveraging understanding	Mansilla (2005)
		Precision and clarity	. be understandable, internally consistent and free from ambiguities	Patterson (1986)
		Empirical grounding	... a formal theory is grounded in some kind of observed and documented experience	Brookfield (1992)

Criteria used in this work		Criteria from the literature- Building blogs		
	(Patterson, 1986) or their logical basis to other-external literature (Dubin, 1978) & practice (Brookfield, 1992).	Prescriptive policing	. . . a theoretical statement makes clear the difference between prescriptive injunctions which grow out of personal or philosophical convictions and empirically grounded insights concerning how a phenomenon and its constituent processes are to be understood	
		Logical consistency	The choice of concepts has immediate implication for the eventual testing or confirmation of the theory. The choice of units must have some logical basis in other theories, research, practice or literature	Dubin (1978)
		Criterion for pragmatic reasoning	Uses abductive logic and allows for the creativity of the abductive process and discontinuity of insight , rather than requiring extensive description of literature search and logic approach which is commonly a feature of quality postpositivistic research, and may inadvertently reward incrementalism rather than discontinuous change	Jayanti (2011)
3. Narrative & illustrative elegance	The complex theorization needs to be narratively elegant, and conceptually rich, provocative and evocative (Lincoln & Lynham, 2011), with adequate use of illustrative techniques (<i>i.e. figures/images, tables, examples when necessary</i>) to facilitate the establishment of a clear understanding (Jayanti, 2011) as	Narrative elegance	be either simple or complex , depending on the matter or phenomenon being theorized; be understandable beyond the scientific community (i.e. accessible in natural language), narratively elegant, and conceptually rich, provocative and evocative	Lincoln & Lynham (2011)
		Parsimony and simplicity	. . . contain a minimum of complexity and few assumptions	Patterson (1986)
		Communicative clarity	the language used in the documentation and description of a formal theory is clear and accessible	Brookfield (1992)
		Assumptive awareness	. . . the assumptions underlying formal theoretical elaborations are made explicit	

Criteria used in this work		Criteria from the literature- Building blogs		
	well as make any assumptions clear (<i>Brookfield, 1992</i>).	Parsimony	Parsimony in theory building refers to the fact that a minimum number of units is used to build the theory as well as relationships among these concepts	Dubin (1978)
		Criterion for pragmatic reasoning	Pairs description with images Uses analogy to aid understanding , as a thing may not be understood in terms of itself, but in terms of its connection with other things	Jayanti (2011)
4. Mutuality of concepts & descriptive logic	The complex theorization and its formalized outputs (<i>Jayanti, 2011</i>) should be conceptualized in propositions (<i>Brookfield, 1992</i>) that are clear and explicit enough (<i>Lincoln & Lynham, 2011</i>), so that they can: 1) Be Put into action by practitioners 2) Be Used and tested by other researchers.	Mutuality of concepts and descriptive logic	display mutuality of concepts and descriptive logic; be made operational, i.e. the descriptive and explanatory framework (concepts, logic and propositions) are made explicit and thus able to be put into action; be capable of being tested by other researchers, and enjoy stakeholders assent to its usefulness for their lives & contexts	Lincoln & Lynham (2011)
		Operationality	. . . be capable of being reduced to procedures for testing its propositions or predictions	Patterson (1986)
		Assumptive awareness	. . . the assumptions underlying formal theoretical elaborations are made explicit	Brookfield (1992)
		Researchability	. . a body of theoretical propositions can be examined for accuracy and validity by people other than those who have advanced these propositions	
		Criterion for pragmatic reasoning	Produces outputs which may take the form of patterns, microworlds, computational models, or mixed-method outputs to the extent that these mixed-methods designs actually combine deductive and inductive reasoning approaches or use a specifically abductive approach , rather than relying solely on deductive or inductive reasoning	Jayanti (2011)

Criteria used in this work		Criteria from the literature- Building blogs		
5. Fruitfulness & critical provocativeness	Theoretical elaborations must be fruitful and provocative, in the sense that they not only illuminate some aspect of social life but also allow room for critique (<i>Mansilla, 2005</i>) and, thus, suggest new avenues of research and/or action (<i>Lincoln & Lynham, 2011</i>).	Fruitfulness and provocativeness	. . . be fruitful and provocative, i.e. illuminate some aspect of social life, and suggest new avenues of research and/or description and/or action	Lincoln & Lynham (2011)
		Critical stance	With this complexity in mind, interdisciplinary student work must also be assessed in terms of the work's self-critical stance - its clarity of goals, conscious judgments about the process of integration, and healthy skepticism about its outcomes. . . . their meta-disciplinary awareness and their critical view of the overall composition of a piece of integrative work..	Mansilla (2005)
		Fruitfulness	. have the capacity to lead to predictions that can be tested, leading to the development of new knowledge, and to provoke thinking and the development of new ideas	Patterson (1986)
		Invitational tone	. . any theoretical elaboration invites refutation, further analysis, critique, and refinement	Brookfield (1992)
		Criterion for pragmatic reasoning	Produces outputs which may take the form of patterns, microworlds, computational models, or mixed-method outputs to the extent that these mixed-methods designs actually combine deductive and inductive reasoning approaches or use a specifically abductive approach, rather than relying solely on deductive or inductive reasoning (thus being more properly evaluated by Positivist or Postpositivist boilerplates)	Jayanti (2011)

Criteria used in this work		Criteria from the literature- Building blogs		
6. Transferability & transportability	<p>The theoretical framework should illustrate, clearly enough, its usefulness for other users (<i>in their own situation/context</i>) and, thus, invite them (<i>Brookfield, 1992</i>) to conduct additional research according to the following dimensions (<i>Lincoln & Lynham, 2011</i>):</p> <p>1) Transferability: the ability in individuals, through interaction between the knower and the known, to carry propositional and/or tacit knowledge from one context to inform another, or multiple other, contexts,</p> <p>2) Transportability: the applicability to different populations, of utility in varying contexts, with varying populations.</p>	Transferability and transportability	<p>..... able transferability – i.e. the ability in individuals (through interaction between the knower and the known) to carry propositional and/or tacit knowledge from one context to inform another, or multiple other, contexts; and transportability –, i.e. the applicability to different populations, of utility in varying contexts, with varying populations</p>	Lincoln & Lynham (2011)
		Transferability	<p>..... be as complete as is possible, given its intended range (local, regional or other), so that other users may see the extent to which the theory may be useful in their own situation/context; enable individuals to carry propositional and/or tacit knowledge from one context to inform another, or multiple other contexts</p>	
		Comprehensive-ness	<p>... be complete, including all known data in the field</p>	Patterson (1986)
		Invitational tone	<p>... any theoretical elaboration invites refutation, further analysis, critique, and refinement</p>	Brookfield (1992)
		Criterion for pragmatic reasoning	<p>Produces outputs which may take the form of patterns, microworlds, computational models, or mixed-method outputs to the extent that these mixed-methods designs actually combine deductive and inductive reasoning approaches or use a specifically abductive approach, rather than relying solely on deductive or inductive reasoning (thus being more properly evaluated by Positivist or Postpositivist boilerplates)</p>	Jayanti (2011)

Criteria used in this work		Criteria from the literature- Building blogs		
7. Interdisciplinary transferability	During an interdisciplinary study distinct disciplines collaborate and, without abolishing their autonomous operation, generate a collective understanding of a research issue (<i>Aboelela, et al. 2007; Repko, 2006</i>). From this perspective, and by following the 6 th criterion of transferability & transportability (<i>Brookfield, 1992; Lincoln & Lynham, 2011</i>), it can be argued that interdisciplinary transferability concerns the extent to	Transferability be as complete as is possible, given its intended range (local, regional or other), so that other users may see the extent to which the theory may be useful in their own situation/context; enable individuals to carry propositional and/or tacit knowledge from one context to inform another, or multiple other contexts	Lincoln & Lynham (2011)
		Comprehensive-ness	. . . be complete, including all known data in the field	Patterson (1986)
		Invitational tone	. . any theoretical elaboration invites refutation, further analysis, critique, and refinement	Brookfield (1992)

Criteria used in this work		Criteria from the literature- Building blogs		
	<p>which theorists from the involved disciplines can realize:</p> <p>1) Contributions of their own discipline and field of study to the addressed problem,</p> <p>2) Advances in their discipline due to the generated interdisciplinary understanding and, thus, become able to conduct further research on the basis of carrying knowledge from the interdisciplinary to the single-disciplinary level and vice versa.</p>	Criterion for pragmatic reasoning	<p>Produces outputs which may take the form of patterns, microworlds, computational models, or mixed-method outputs to the extent that these mixed-methods designs actually combine deductive and inductive reasoning approaches or use a specifically abductive approach, rather than relying solely on deductive or inductive reasoning (thus being more properly evaluated by Positivist or Postpositivist boilerplates)</p>	Jayanti (2011)
8. Empirical verifiability	<p>The theory should generate new knowledge (<i>Patterson, 1986</i>) that match some element of socially constructed life, as this is judged based on the 'lived experience' (<i>reflect personal experience, meaning-making, or general observations</i>) of the respondents (<i>Lincoln & Lynham, 2011</i>).</p>	Empirical verifiability	<p>be supported by 'lived experience,' be verified by the respondents that it 'rings true,' or that it reflects some aspect of their experience, meaning-making, or observation; match some element of socially constructed life; generate both new social scientific knowledge, and new respondent learning</p>	Lincoln & Lynham (2011)
		Empirical validity or verification	<p>. . eventually be supported by experience and experiments that confirm it; must generate new knowledge</p>	Patterson (1986)

Criteria used in this work		Criteria from the literature- Building blogs		
9. Usefulness & applicability	<p>The theoretical advances must be useful and applicable for ordinary persons, suggesting ways of being in the world, or ways of altering one's circumstances in some context (<i>Mansilla, 2005</i>). Specifically, it should provide (<i>Lincoln & Lynham, 2011</i>):</p> <p>1) new ways of seeing old situations, such that meaningful change can occur,</p> <p>2) models for human flourishing, as living knowledge, and for practical application and high organizational performance.</p>	Usefulness and applicability	be useful and applicable to ordinary persons, suggesting ways of being in the world, or ways of altering one's circumstances in some context; provide new ways of seeing old situations, such that meaningful human change can occur; provide models for human flourishing, as living knowledge, and for practical application and high organizational performance	Lynham
		Performance	Builds on performance view of understanding. It privileges the capacity to use knowledge over that of simply having or accumulating it. From this perspective, individuals understand a concept when they are able to apply it—or think with it—accurately and flexibly in novel situations	Mansilla (2005)
		Practicality	. . . be useful to practitioners in organizing their thinking and practice by providing a conceptual framework for practice	Patterson (1986)
		Connectedness	. . formal theoretical assertions can be understood by practitioners as having some kind of connection to their own activities	Brookfield (1992)
10. Compellingness & Prompt to action	The theoretical framework should provide a good conceptual understanding of practice and create a prompt to action on the part of a wider set of audiences/stakeholders who have a legitimate stake in the findings. Essentially, it should	Prompt to action	. . .provide a good conceptual understanding of practice; proceeding from compellingness (an inextricably linked criterion) such that researchers and respondents understand where and how to move next in a given context, including how to refine, hone, sharpen, and revise practice, and to alter performance in the light of new information; connect theory with action and learning for continuous refinement and improvement, illustrating practicality of the theory	Lincoln & Lynham (2011)

Criteria used in this work		Criteria from the literature- Building blogs		
	connect theory with action and learning for continuous refinement and improvement, illustrate practicality of the theory (<i>Lincoln & Lynham, 2011</i>) by assisting in the realization of certain social and political values (<i>for a better world</i>) and in improving social and political condition (<i>Brookfield 1992</i>).	Value-judgmental explicitness	. .. formal theorizing is informed by attention to the role which theoretical understanding can play in assisting in the realization of certain social and political values and in improving social and political condition	Brookfield (1992)

Appendix 6: Research methodology for the formative evaluation plan

This appendix aims to present the steps of the formative evaluation research in detail. It works as a complementary for ch.9.

6.1 Formulate evaluative propositions & present them to the experts

The table below demonstrates the propositions that the researcher developed in order to operationalize the theoretical understanding of this work. Specifically, the table includes:

- 1st column – A code for each proposition that simplifies the processes of cross-referencing with and traceability of the corresponding text in the main body of the work. The codes take the form of “PC.Sn” (P=proposition; C=Chapter; S=section; n=A numerical order that was used in order to distinguish between propositions that refer to the same section and subsection: i.e. a1, a2, b1, b2, c). Also, the range of pages that each proposition refers to is mentioned.
- 2nd column – The proposition in detail.
- 3rd column - The simple statements to which the complex propositions were broken down so that the evaluation process could be facilitated. The coding for each statement takes the form of “S(Px)n” (S=statement; Px=the proposition that the statement refers to, which also abides by the coding logic that was described in the first bullet; n= A numerical order for distinguishing between the statements that refer to the same proposition, i.e. 1, 2, 3. . .).

The statements were conceptualized in an electronic format and were presented to the experts so that the latter can evaluate them. The electronic version of the evaluation study was designed on PowerPoint under the main principle that the evaluator should be guided through the logical steps that led to the development of the theoretical framework of the current work, as this is illustrated in the figures that were presented throughout the thesis. Therefore, each statement was presented along with its corresponding part of the figures, which enabled a visual understanding of the statement under evaluation. In addition, the option to refer in the complete text from which the statement derived was also provided. The electronic version of the evaluation study has been submitted along with the thesis in a CD-ROM. A copy can also be send through e-mail after request. Please contact the researcher at V.Kitsos@warwick.ac.uk.

Chapter & Section		Proposition		Statement	
1		P1	Even when evidence issue an urgent appeal for change (crisis), there can be cases in which business-leaders avoid instigating action.	P1	Even when evidence issue an urgent appeal for change (crisis), there can be cases in which business-leaders avoid instigating action.
3	2	P3.2a	The existence of a discrepant message not only establishes the necessary conditions for change to occur but also can make cognitive schemas to (re)act defensively.	S(P3.1)1	The existence of a discrepant message establishes the necessary conditions for change to occur.
				S(P3.1)2	The existence of a discrepant message can make cognitive schemas to (re)act defensively.
		P3.2b	Resistance to a schema change process occurs when leaders rationalize the discrepancy; either by omitting it (attention) and, thus, completely rejecting the need for change, or by (mis)comprehending it (interpretation) and, thus, avoiding any fruitful action.	S(P3.2a)1	Resistance to a schema change process occurs when leaders rationalize the discrepancy.
				S(P3.2a)2	Rationalization can take the form of omitting the discrepancy (attention) and, thus, completely rejecting the need for change.
				S(P3.2a)3	Rationalization can also take the form of (mis)comprehending the discrepancy (interpretation) and, thus, avoiding any fruitful action.
		P3.2c	Rationalization prevents transformational action by constituting assimilation (incremental adjustments of schemas) an adequate response to the need for change, when actually accommodation (paradigmatic shift of existing schemas) is necessary.	S(P3.2b)1	S(P3.2b)1: Transformational action requires cognitive accommodation (paradigmatic shift of existing schemas).
				S(P3.2b)2	Rationalization prevents transformational action by constituting cognitive assimilation (incremental adjustments of schemas) an adequate response to the need for change.
4	1	P4.1	Schema change is an emotional process, during which cognitive appraisals of the received evidence dynamically interact with the generated affective-emotional impulses, and in common	S(P4.1)1	Schema change is an emotional process during which cognitive appraisals of the received evidence dynamically interact with the generated affective-emotional impulses.

			.determine the emotionally driven coping response to the faced discrepancy.	S(P4.1)2	The outcome of the dynamic interaction between cognitions and affective impulses is an emotionally driven coping response to the faced discrepancy.
	2	P4.2a	Each evaluative dimension entails positive or negative implications for a leader's goals and strivings, which are reflected in a micro-valence that is able to influence subsequent appraisals and, thus, the response to be adopted.	S(P4.2a)1	Each evaluative dimension entails positive or negative implications for a leader's goals and strivings, which are reflected in a micro-valence.
				S(P4.2a)2	This is able to influence subsequent appraisals and, thus, the response to be adopted.
		P4.2b	Emotions are rational mechanisms that promote coping activity based on the goals help by the appraiser. This activity aims to change the leader-environment relationship on the basis of moving from the perceptual state of "evidence suggest transformational change" to the one in which "evidence does not suggest transformational change".	S(P4.2b)	Emotions are rational mechanisms that promote coping activity based on the goals help by the appraiser. This activity aims to change the leader-environment relationship on the basis of moving from the perceptual state of "evidence suggest transformational change" to the one in which "evidence does not suggest transformational change".
		P4.2c	Broadly speaking, a coping strategy-response can either take the form of direct action that aims to tackle the faced problem (adaptive), or be the outcome of an ego-defence, which driven by the need to regulate the experienced emotional distress, rationalize the appraised message and, thereby, produce a compromised response (maladaptive).	S(4.2c)1	In the adaptive scenario, a coping response-strategy takes the form of direct action that aims to tackle the faced problem.
				S(P4.2c)2	In the maladaptive scenario, the coping response-strategy is the outcome of an ego-defence, which, driven by the need to regulate the experienced emotional distress, rationalizes the appraised message and, thereby, produces a compromised response.
	3	P4.3a	Leaders should align personal ego-commitments (i.e. individual-oriented beliefs, values and life goals) which constitute someone's ego-identity and mainly have a social-oriented nature, with the	S(P4.3a)1	Leaders should align personal ego-commitments (i.e. individual-oriented beliefs, values and life goals) which constitute someone's ego-identity and mainly have a social-oriented nature, with the needs of their

			needs of their organization, in general and in reference to the case they face. This balance is necessary for avoiding ego-centric evaluations that lead to maladaptive responses in the light of evidence that indicate the need for change.		organization, in general and in reference to the case they face.
				S(P4.a2)2	This balance is necessary for avoiding ego-centric evaluations that lead to maladaptive responses in the light of evidence that indicate the need for change.
		P4.3b	“Leaders” who have been taught, as well as blindly followed the current societal paradigm, will perceive the world through an ego-centric perspective. As a result, when the evidence that indicate the need for change are perceived as threatening for the ego, this morbid egocentricity is able to engage leaders in responding defensively to the need for change.	S(P4.3b)	“Leaders” who have been taught, as well as blindly followed the current societal paradigm, will perceive the world through an ego-centric perspective. As a result, when the evidence that indicate the need for change are perceived as threatening for the ego, this morbid egocentricity is able to engage leaders in responding defensively to the need for change.
		P4.3c1	A crisis will pose a threat to the leader and, thus, will promote negative emotions that need to be adaptively regulated for transformational change to occur.	S(P4.3c1)	A crisis will pose a threat to the leader and, thus, will promote negative emotions that need to be adaptively regulated for transformational change to occur.
		P4.3c2	Specifically, the adaptiveness of individuals’ actions and behaviour depends on whether the implicit emotion regulation will be adaptive by supporting appraisals to control the negative emotion and face the challenge or maladaptive by operating as the basis upon which defence mechanisms that distort the perceived evidence will be triggered.	S(P4.3c2)	Specifically, the adaptiveness of individuals’ actions and behaviour depends on whether the implicit emotion regulation will be adaptive by supporting appraisals to control the negative emotion and face the challenge or maladaptive by operating as the basis upon which defence mechanisms that distort the perceived evidence will be triggered.
		P4.3c3	“Threatened” ego-commitments can motivate the construction of a reality that ignores the discrepant of the evidence for change and fortifies leaders’ self-interests in the status quo.	S(P4.3c3)	“Threatened” ego-commitments can motivate the construction of a reality that ignores the discrepant of the evidence for change and fortifies leaders’ self-interests in the status quo.

		P4.3d	The specific nature of the adopted maladaptive response depends on the triggered ego-defence and can be differentiated upon the consciously expressed emotional dimensions-components of cognitive understanding, coping behaviour and subjective feeling.	S(P4.3d)	The specific nature of the adopted maladaptive response depends on the triggered ego-defence and can be differentiated upon the consciously expressed emotional dimensions-components of cognitive understanding, coping behaviour and subjective feeling.
5	1	P5.1a	Due to their natural primacy, unconscious processes will be invoked first to appraise the faced evidence regarding its novelty, intrinsic pleasantness and relevance for leader's concerns, and, thereby, will determine if the essential for change emotional experience as well as the concomitant conscious and reflective consideration to the discrepancy at hand will be triggered.	S(P5.1a)1	Due to their natural primacy, unconscious processes will be invoked first to appraise the faced evidence regarding its novelty, intrinsic pleasantness and relevance for leader's concerns.
				S(P5.1a)2	Transformational changes as responses to a crisis require an insightful approach to information processing and a reflective reconsideration of the established schemas which presupposes an emotional reaction to the discrepancy.
				S(P5.1a)3	The initial preconscious appraisals will determine if conscious and reflective consideration to the discrepancy at hand will be given.
		P5.1b	Leaders who appraise the negative valance of a discrepancy could respond defensively in order to avoid the forthcoming "painful" emotional experience, by engaging in the process of maladaptive attentional deployment (denial) and, thus, omitting any undesirable evidence (rationalization) that indicates the need for change.	S(P5.1b)1	Leaders who appraise the negative valance of a discrepancy could respond defensively in order to avoid the forthcoming "painful" emotional experience.
				S(P5.1b)2	Defensive appraisals at this stage occur when the individual engages in the process of maladaptive attentional deployment (denial).
				S(P5.1b)3	Denial leads to the omission of any undesirable evidence (rationalization) that indicates the need for change.

	2	P5.2	<p>Denial could be caused by the mechanism of selective attention, which is effectuated through the ability of cognitive schemas to make comforting information more salient and/or drive the individual-leader to avoid including (omit) discrepant evidence in the interpretation process.</p> <p>In this case, the discrepant message is unconsciously assimilated and, hence, the leader expresses no conscious consideration of the need to take action.</p>	S(P5.2)1	Denial could be caused by the mechanism of selective attention, which is effectuated through the ability of cognitive schemas to make comforting information more salient and/or drive the individual-leader to avoid including (omit) discrepant evidence in the interpretation process.
				S(P5.2)2	In the case of selective attention, the discrepant message is unconsciously assimilated and, hence, the leader expresses no conscious consideration of the need to take action.
	3	P5.3a	<p>Denial could be caused by the mechanism of psychological disengagement, in which case the leader disengages emotionally from the domain that is challenged by the discrepant message, with the aim of preventing a potential blame of the current schemas from being ascribed and, thus, his/her self-esteem from being damaged.</p>	S(P5.3a)1	Realizing the relevance of the faced discrepancy for personal goals/concerns and, thus, staying emotionally engaged, is a necessary step for the leader to challenge his/her schemas.
				S(P5.3a)2	Relevant and discrepant evidence poses a challenge to leader's self-esteem, which can be avoided by triggering the mechanism of psychological disengagement.
				S(P5.3a)3	When the mechanism of psychological disengagement is triggered, the leader disengages emotionally from the domain that is challenged by the discrepant message, and, thus, prevents the necessary challenge to his/her schemas and any further action from being actualized.
		P5.3b	<p>Disengagement could occur due to the mechanism of disidentification, according to which leaders, who try to protect themselves from the failure stigma, neglect or miss discrepancies in the challenged domains, and focus on those supplementary ones, with which they feel more confident, for protecting their esteem.</p>	S(P5.3b)	<p>Disengagement could occur due to the mechanism of disidentification, according to which leaders, who try to protect themselves from the failure stigma, neglect or miss discrepancies in the challenged domains, and focus on those supplementary ones, with which they feel more confident, for protecting their esteem.</p>

		P5.3c	Disengagement could occur due to the mechanism of discounting hypothesis, according to which leaders discount and, hence, deny a negative discrepant message that comes from customers/suppliers by attributing it to imaginary prejudices and/or lack of trust against their company.	S(P5.3c)	Disengagement could occur due to the mechanism of discounting hypothesis, according to which leaders discount and, hence, deny a negative discrepant message that comes from customers/suppliers by attributing it to imaginary prejudices and/or lack of trust against their company.
	4	P5.4	A discrepant message that is accepted as relevant will generate the pre-emotion of surprise (element of a crisis), which, in its turn, establishes the general conditions for the schematic change to occur by capturing attention to the faced issue, unfreezing the basic motives for change as well as driving the leader into a state of higher cognitive ability and conscious engagement.	S(P5.4)1	A discrepant message that has been appraised as relevant will generate the (pre)emotion of surprise, which is an ingrent element of any crisis situation.
				S(P5.4)2	The emotion of surprise will make the leader aware of the discrepancy by directing his/her attention towards it
				S(P5.4)3	Apart from the conscious awareness, the emotion of surprise will unfreeze the basic motives for change as well as drive the leader into a state of higher cognitive ability and conscious engagement.
6	1	P6.1a	In the reflective and conscious state, cognition breaks down into two interdependent types-systems that, respectively, represent a basic distinction in human mind; one that cognitively interprets the evidence (gnosis-driven mind), and another that affectively evaluates it in reference to personal implications (ego-driven mind).	S(P6.1a)	In the reflective and conscious state, cognition breaks down into two interdependent types-systems that, respectively, represent a basic distinction in human mind; one that cognitively interprets the evidence (gnosis-driven mind), and another that affectively evaluates it in reference to personal implications (ego-driven mind).
		P6.1b	The ego-driven mind comprises an individual's unconscious mental models, general knowledge and superordinate goals (global meaning system), upon which unconscious and intuitive (hot) cognitions draw to appraise the faced evidence.	S(P6.1b)1	The ego-driven mind comprises an individual's unconscious mental models, general knowledge and superordinate goals (global meaning system), upon which unconscious and intuitive (hot) cognitions draw to appraise the faced evidence.

			The outcome is an emotional experience that projects to consciousness a self-ego attached and, therefore, highly subjective understanding of reality.	S(P6.1b)2	The outcome is an emotional experience that projects to consciousness a self-ego attached and, therefore, highly subjective understanding of reality.
		P6.1c	Conscious experience and understanding are realized in the gnosis-driven mind, where various construal related (cold) cognitions, which follow the ego-driven intuitive appraisals, draw upon an individual's global meaning system in order to (re)evaluate the evidence on a reflective and relatively ego-detached basis. The outcome is a controlled-regulated emotional experience that entails a more objective meaning of the encountered reality.	S(P6.1c)1	Conscious experience and understanding are realized in the gnosis-driven mind, where various construal related (cold) cognitions, which follow the ego-driven intuitive appraisals, draw upon an individual's global meaning system in order to (re)evaluate the evidence on a reflective and relatively ego-detached basis.
				S(P6.1c)2	The outcome is a controlled-regulated emotional experience that entails a more objective meaning of the encountered reality.
	2	P6.2a	The instigation of change requires a set of basic steps (evaluative dimensions), which correspond to specific intuitive appraisals and reflective evaluations, to occur. These are the classification of the identified discrepancy as a crisis (Problem detection) that calls for an urgent response (Evaluate urgency rate), and for which the leader accepts causal responsibility (Responsibility diagnosis) as well as realizes that control can be exerted (Assess situational control) and efficacious change can be applied (Evaluate change efficacy).	S(P6.2a)	The instigation of change requires a set of basic steps (evaluative dimensions), which correspond to specific intuitive appraisals and reflective evaluations, to occur. These are the classification of the identified discrepancy as a crisis (Problem detection) that calls for an urgent response (Evaluate urgency rate), and for which the leader accepts causal responsibility (Responsibility diagnosis) as well as realizes that control can be exerted (Assess situational control) and efficacious change can be applied (Evaluate change efficacy).

	P6.2b1	The two minds do not operate on an either/or basis. Instead, for each evaluative dimension (step) of the emotional change process the corresponding intuitive appraisal (ego-driven) and reflective evaluation (gnosis-driven) dynamically interact and in common determine the “emotional” response to be taken.	S(P6.2b1)	The two minds do not operate on an either/or basis. Instead, for each evaluative dimension (step) of the emotional change process the corresponding intuitive appraisal (ego-driven) and reflective evaluation (gnosis-driven) dynamically interact and in common determine the “emotional” response to be taken.
	P6.2b2	The pre-emotion of surprise will engage the conscious and controlled (gnosis-driven) cognitive processes which, in their turn, create an imagistic representation of the act of changing that needs to be appraised.	S(P6.2b2)	The pre-emotion of surprise will engage the conscious and controlled (gnosis-driven) cognitive processes which, in their turn, create an imagistic representation of the act of changing that needs to be appraised.
	P6.2b3	Any evidence relevant to the act of changing will initially be evaluated, from an ego-driven perspective, by an unconscious intuitive appraisal, which through the produced subjective feeling will inform the ongoing conscious emotional experience.	S(P6.2b3)	Any evidence relevant to the act of changing will initially be evaluated, from an ego-driven perspective, by an unconscious intuitive appraisal, which through the produced subjective feeling will inform the ongoing conscious emotional experience.
	P6.2b4	During the initial intuitive appraisal the gnosis-driven mind operates in a lower level and, eventually, appropriates the unconscious evaluative results. This creates an illusion of conscious will, in the sense that the individual is consciously aware of the reflective evaluation, while it is the intuitive appraisal that actually determines the fate of the process.	S(P6.2b4)1	During the initial intuitive appraisal the gnosis-driven mind operates in a lower level and, eventually, appropriates the unconscious evaluative results.
			S(P6.2b4)2	This creates an illusion of conscious will, in the sense that the individual is consciously aware of the reflective evaluation, while it is the intuitive appraisal that actually determines the fate of the process.
	P6.2b5	When, and if, the gnosis-driven mind with its reflective evaluations gets actually engaged, the	S(P6.2b5)1	When, and if, the gnosis-driven mind with its reflective evaluations gets actually engaged, the ego-driven

			ego-driven processes are attenuated and a regulation of the emotional experience occurs. The outcome is a counter emotional impulse that re-determines understanding and action on a more ego-detached and objective basis.		processes are attenuated and a regulation of the emotional experience occurs.
				S(P6.2b5)2	The outcome is a counter emotional impulse that re-determines understanding and action on a more ego-detached and objective basis.
		P6.2c1	The unconscious ego-driven mind is dominating the process, since it is its intuitive appraisals that, most of the times, will exclusively determine the emotional experience and, ultimately, the coping response to be adopted.	S(P6.2c1)	The unconscious ego-driven mind is dominating the process, since it is its intuitive appraisals that, most of the times, will exclusively determine the emotional experience and, ultimately, the coping response to be adopted.
		P6.2c2	Even when the controlled processes of the gnosis driven mind get actively engaged in order to reflect on the initial emotional impulses, the unconscious intuitive appraisals are still necessary in order to generate the regulated-controlled emotional experience.	S(P6.2c2)	Even when the controlled processes of the gnosis driven mind get actively engaged in order to reflect on the initial emotional impulses, the unconscious intuitive appraisals are still necessary in order to generate the regulated-controlled emotional experience.
		P6.2c3	In reflection, the evidence are unconsciously re-evaluated in the light of the previously produced and ongoing emotional experience, as this is conceptualized in and provided by the gnosis-driven mind. As a result, the individual could engage in the potentially perpetual process of objectification, during which the generated meaning-understanding gradually detaches from the ego-self and, thus, becomes a conception of expanded consciousness.	S(P6.2c3)1	In reflection, the evidence are unconsciously re-evaluated in the light of the previously produced and ongoing emotional experience, as this is conceptualized in and provided by the gnosis-driven mind.
				S(P6.2c3)2	As a result, the individual could engage in the potentially perpetual process of objectification, during which the generated meaning-understanding gradually detaches from the ego-self and, thus, becomes a conception of expanded consciousness.

3	P6.2d1	The dynamic interaction of the two systems has to generate an emotional experience that through its action tendencies will motivate the leader to decide taking action able to cope with the crisis.	S(Pc6.2d1)	The dynamic interaction of the two systems has to generate an emotional experience that through its action tendencies will motivate the leader to decide taking action able to cope with the crisis.
	P6.2d2	The evaluative dimensions involve micro valences that get integrated in a holistic core affect. Eventually, this core affect is formalized into an unconscious affective impulse (aversive or appetitive) and a conscious understanding of the case, which in common inform the decision to be taken.	S(P6.2d2)1	The evaluative dimensions involve micro valences that get integrated in a holistic core affect.
			S(P6.2d2)2	Eventually, this core affect is formalized into an unconscious affective impulse (aversive or appetitive) and a conscious understanding of the case, which in common inform the decision to be taken.
	P6.3a	Whether reflection will occur or not depends on conscious guidance (gnosis-driven mind) which is accompanied by an unconscious approval (ego-driven mind) of putting a veto on the already produced emotional response.	S(P6.3a)	Whether reflection will occur or not depends on conscious guidance (gnosis-driven mind) which is accompanied by an unconscious approval (ego-driven mind) of putting a veto on the already produced emotional response.
	P6.3b	After the generation of an ego-centric meaning, processes of the reflective mind can either engage (objectification) or remain apathetic, which makes it possible to conceive two distinct, yet similar in their fundamentals, ways of a defensive response's manifestation. In the former case leaders become victims of an illusionary reality that is accepted as the only and one logical truth. In the latter case a counter emotional impulse of a relatively more ego-detached meaning is generated, which leads to a conflict between contradictory motivational	S(P6.3b)1	After the generation of an ego-centric meaning, processes of the reflective mind can either engage (objectification) or remain apathetic, which makes it possible to conceive two distinct, yet similar in their fundamentals, ways of a defensive response's manifestation.
			S(P6.3b)2	In the former case leaders become victims of an illusionary reality that is accepted as the only and one logical truth.
			S(P6.3b)3	In the latter case a counter emotional impulse of a relatively more ego-detached meaning is generated,

			valences, with the dominant one determining the response to be taken.		which leads to a conflict between contradictory motivational valences, with the dominant one determining the response to be taken.
		P6.3c1	Ego-defensiveness in the reflective state occurs when the necessary emotional action tendencies (vigilance) towards change are repressed through the mechanism of implicit maladaptive emotion regulation. Specifically, threatened ego-commitments will generate negative, yet necessary for change, emotionality, which leaders avoid by engaging in the process of motivational reasoning that aims to protect the honour of the attacked ego.	S(P6.3c1)1	Ego-defensiveness in the reflective state occurs when the necessary emotional action tendencies (vigilance) towards change are repressed through the mechanism of implicit maladaptive emotion regulation.
				S(P6.3c1)2	Specifically, threatened ego-commitments will generate negative, yet necessary for change, emotionality, which leaders avoid by engaging in the process of motivational reasoning that aims to protect the honour of the attacked ego.
		P6.3c2	Motivational reasoning is based on the regulatory mechanism of cognitive change, according to which the appraised meaning of the evidence at hand is unconsciously distorted in favour of the ego. This leads to the rationalization of the discrepancy and, thereby, to no or inadequate change.	S(P6.3c2)	Motivational reasoning is based on the regulatory mechanism of cognitive change, according to which the appraised meaning of the evidence at hand is unconsciously distorted in favour of the ego. This leads to the rationalization of the discrepancy and, thereby, to no or inadequate change.
7	1	P7.1a1	“Detecting a crisis-problem” requires the leader to classify the discrepancy, which has already been sensed in an unconscious level, as significant (high magnitude) enough to challenge core practices and the survival of the organization.	S(P7.1a1)	“Detecting a crisis-problem” requires the leader to classify the discrepancy, which has already been sensed in an unconscious level, as significant (high magnitude) enough to challenge core practices and the survival of the organization.
		P7.1a2	The classification of a discrepancy occurs through its conscious verification, which is provided by the reflective evaluation of “Business-goal congruency”.	S(P7.1a2)	The classification of a discrepancy occurs through its conscious verification, which is provided by the reflective evaluation of “Business-goal congruency”.

		P7.1b1	In addition to business goals, the evidence for change will challenge a leader's personal ego-commitments. This challenge is captured in the intuitive level by an preconscious appraisal of "Ego-commitments congruency", which considers personal goals along with business ones that are held by the leader.	S(P7.1b1)	In addition to business goals, the evidence for change will challenge a leader's personal ego-commitments. This challenge is captured in the intuitive level by an preconscious appraisal of "Ego-commitments congruency", which considers personal goals along with business ones that are held by the leader.
		P7.1b2	Evidence that is intuitively appraised as non-congruent with ego-commitments can trigger the defence mechanism of "Trivialization", through which the magnitude of the faced problem (Business Goal Congruency) is reduced.	S(P7.1b2)	Evidence that is intuitively appraised as non-congruent with ego-commitments can trigger the defence mechanism of "Trivialization", through which the magnitude of the faced problem (Business Goal Congruency) is reduced.
		P7.1c1	An appraisal of business goal incongruence (problem-crisis) will reveal the magnitude of the faced issue and will prepare the leader for large scale action. On the contrary, trivialization will lead to a perception of no need for change (extreme trivialization) or need for minor changes (slight trivialization). In the former case leaders stick with the current status-quo, while in the latter they prepare for minor changes.	S(P7.1c1)1	An appraisal of business goal incongruence (problem-crisis) will reveal the magnitude of the faced issue and will prepare the leader for large scale action.
				S(P7.1c1)2	On the contrary, trivialization will lead to a perception of no need for change (extreme trivialization) or need for minor changes (slight trivialization). In the former case leaders stick with the current status-quo, while in the latter they prepare for minor changes.
		P7.1c2	During the evaluative dimension of problem detection there are three main differentiations in the feeling component of the emotional experience: 1. A distinction between the experienced general feelings of happiness (goal congruence) vs sadness & fear (goal incongruence) is drawn 2. The path for negative (Guilt, Shame) vs positive	S(P7.1c2)	During the evaluative dimension of problem detection there are three main differentiations in the feeling component of the emotional experience: 1. A distinction between the experienced general feelings of happiness (goal congruence) vs sadness & fear (goal incongruence) is drawn 2. The path for negative (Guilt, Shame) vs positive (Gratitude, Pride) feelings to be generated in subsequent

			(Gratitude, Pride) feelings to be generated in subsequent appraisals is paved 3. Goal incongruence due to slight trivialization will generate negative feeling but of lower intensity compared to cases where the full magnitude of the crisis is realized. This difference will be reflected in the type of hope that will be produced at the final stages of the emotional change process (coping potential).		appraisals is paved 3. Goal incongruence due to slight trivialization will generate negative feeling but of lower intensity compared to cases where the full magnitude of the crisis is realized. This difference will be reflected in the type of hope that will be produced at the final stages of the emotional change process (coping potential).
	2	P7.2a1	A crisis is a situation that places the organization under extreme pressure and calls for action to be taken “now”, since any further delay will simply deteriorate the condition of the organization (Evaluate urgency rate).	S(P7.2a1)	A crisis is a situation that places the organization under extreme pressure and calls for action to be taken “now”, since any further delay will simply deteriorate the condition of the organization (Evaluate urgency rate).
		P7.2a2	The need to take action “now” has to be realized first & foremost by the (top) leader. This is done through the reflective evaluation of “Urgency check”, during which the leader considers numerical-rational factors regarding the costs and benefits of proceeding immediately to or delaying the initiation of change.	S(P7.2a2)	The need to take action “now” has to be realized initially by the leader. This is done through the reflective evaluation of “Urgency check”, during which the leader considers numerical-rational factors regarding the costs & benefits of proceeding immediately to or delaying change.
		P7.2a3	The evaluation of urgency is underpinned by the intuitive appraisal of “Effort considerations”, a part of which reflects the urgency check by evaluating how soon the necessary effort for change should be exerted (Temporal Proximity).	S(P7.2a3)	The evaluation of urgency is underpinned by the intuitive appraisal of “Effort considerations”, a part of which reflects the urgency check by evaluating how soon the necessary effort for change should be exerted (Temporal Proximity).
		P7.2b1	In addition to the aspect of temporal proximity, the intuitive appraisal of “Effort considerations” evaluates the faced evidence along three	S(P7.2b1)	In addition to the aspect of temporal proximity, the intuitive appraisal of “Effort considerations” evaluates the faced evidence along three dimensions related to the

			dimensions related to the change effort and able to manipulate the levels of urgency. These include, the general aversiveness of a transformational change (Aversiveness); the obligation of leaders to drive change successfully as this is evaluated by various stakeholders (Ego-threat); the fact that exacting efforts that are expected to pay back in the long-term are required (Level of difficulty).		change effort and able to manipulate the levels of urgency. These include, 1. The general aversiveness of a transformational change (Aversiveness) 2. The obligation of leaders to drive change successfully as this is evaluated by various stakeholders (Ego-threat) 3. The fact that exacting efforts that are expected to pay back in the long-term are required (Level of difficulty).
		P7.2b2	In order to protect the self from undergoing this difficult and potentially ego-threatening change process, “Defensive procrastination” is triggered and prevents the essential implementation intentions to act “now” (Realization of Urgency) from being consciously formulated.	S(P7.2b2)1	In order to protect the self from undergoing this difficult and potentially ego-threatening change process, “Defensive procrastination” is triggered.
				S(P7.2b2)2	“Defensive procrastination” prevents the essential implementation intentions to act “now” (Realization of Urgency) from being consciously formulated.
		P7.2c1	In case of positive emotional experiences (Goal congruence) urgency to take action is, by definition, low since there is no need for change and, thus, the leader can relax and enjoy the illusionary success.	S(P7.2c1)	In case of positive emotional experiences (Goal congruence) urgency to take action is, by definition, low since there is no need for change and, thus, the leader can relax and enjoy the illusionary success.

3	P7.2c2	In case of negative emotions (Goal incongruence) a set of initial tendencies to act and ameliorate the problematic situation, which establish the basis for the realization of urgency, have already been formulated. These tendencies will be either allowed to set in and develop a desire to move and win now (Sense of urgency), or suppressed and drive the leader into a state where awareness of the crisis exists, but urgency is missing and other concerns acquire priority (Defensive procrastination).	S(P7.2c2)	In case of negative emotions (Goal incongruence) a set of initial tendencies to act and ameliorate the problematic situation, which establish the basis for the realization of urgency, have already been formulated. These tendencies will be 1. either allow to set in and develop a desire to move and win now (Sense of urgency), 2. or suppressed and drive the leader into a state where awareness of the crisis exists, but urgency is missing and other concerns acquire priority (Defensive procrastination).
	P7.2c3	In the evaluative dimension of urgency rate there are three main points regarding the feeling component: 1. Positive emotions are characterized by low sense of urgency to act now 2. Negative emotions, the tendencies of which have not been suppressed, will be allowed to set in and get further differentiated in subsequent appraisals. 3. An evaluation of urgency will establish the emotion of fear. 4. Negative emotions, the tendencies of which have been suppressed, will be accompanied by indifference.	S(P7.2c3)	In the evaluative dimension of urgency rate there are three main points regarding the feeling component: 1. Positive emotions are characterized by low sense of urgency to act now 2. Negative emotions, the tendencies of which have not been suppressed, will be allowed to set in and get further differentiated in subsequent appraisals. 3. An evaluation of urgency will establish the emotion of fear. 4. Negative emotions, the tendencies of which have been suppressed, will be accompanied by indifference.
	P7.3a	Transformations as responses to crises require the leader to “evaluate” and willingly accept “causal responsibility” for the current organizational	S(P7.3a)	Transformations as responses to crises require the leader to “evaluate” and willingly accept “causal responsibility” for the current organizational situation.

			situation. This sense of responsibility is based on the logic that (top) leaders, as the key decision makers of an organization, are the main causal agents of a crisis that should (Obligation) and could (Control) have been “potentially” avoided (Preventability).	S(P7.3a)2	This sense of responsibility is based on the logic that (top) leaders, as the key decision makers of an organization, are the main causal agents of a crisis that should (Obligation) and could (Control) have been “potentially” avoided (Preventability).
		P7.3b1	The evaluation of causal responsibility is underpinned by the intuitive appraisal of “Blame & Credit”, which considers the same dimension that determine responsibility attribution along with the hot-affective social implications that undertaking this responsibility might entail.	S(P7.3b1)1	The evaluation of causal responsibility is underpinned by the intuitive appraisal of “Blame & Credit”.
				S(P7.3b1)2	Blame & Credit considers the same dimension that determine responsibility attribution along with the hot-affective social implications that undertaking this responsibility might entail.
		P7.3b2	The unconscious sense that causal responsibility for the crisis lies with the self-leader can trigger the defence of “Self-serving attribution”, which takes advantage of the general ambiguity of cause that characterizes a crisis and promotes the conscious misattribution of responsibility to external agents.	S(P7.3b2)	The unconscious sense that causal responsibility for the crisis lies with the self-leader can trigger the defence of “Self-serving attribution”, which takes advantage of the general ambiguity of cause that characterizes a crisis and promotes the conscious misattribution of responsibility to external agents.
		P7.3c1	An internal attribution of causal responsibility will direct any action tendencies towards the self-leader and his/her inaccurate mental models regarding how the system should operate. On the contrary, an external (mis)attribution, will direct	S(P7.3c1)1	An internal attribution of causal responsibility will direct any action tendencies towards the self-leader and his/her inaccurate mental models regarding how the system should operate.

			action tendencies towards either external others (scapegoats) or general political-economic circumstances that seem convenient to be blamed for the crisis.	S(P7.3c1)2	S(P6.3c1)2: On the contrary, an external attribution, will direct action tendencies towards either external others or general political-economic circumstances that seem convenient to be blamed for the crisis.
		P7.3c2	If general circumstances are blamed, leaders engage solely in the essential, yet insufficient process of grieving about the loss of the old status quo.	S(P7.3c2)	If general circumstances are blamed, leaders engage solely in the essential, yet insufficient process of grieving about the loss of the old status quo.
		P7.3c3	<p>Respectively, in the evaluative dimension of causal responsibility diagnosis there are three main points regarding the feeling component:</p> <ol style="list-style-type: none"> 1. In goal congruent cases the general emotion of happiness will be accompanied by either pride (Internal attribution) or Gratitude (External attribution) 2. In goal incongruent cases the general emotions of sadness and fear will be accompanied by either anger (External misattribution) or shame-guilt (Internal attribution) 3. Misattribution of responsibility to general circumstances will make the leader surrender to sadness and to a certain extend fear, and, thus, respond to the crisis only by grieving for the loss of the old status quo (no basis for active intentions). 	S(P7.3c3)	<p>Respectively, in the evaluative dimension of causal responsibility diagnosis there are three main points regarding the feeling component:</p> <ol style="list-style-type: none"> 1. In goal congruent cases the general emotion of happiness will be accompanied by either pride (Internal attribution) or Gratitude (External attribution) 2. In goal incongruent cases the general emotions of sadness and fear will be accompanied by either anger (External misattribution) or shame-guilt (Internal attribution) 3. Misattribution of responsibility to general circumstances will make the leader surrender to sadness and to a certain extend fear, and, thus, respond to the crisis only by grieving for the loss of the old status quo (no basis for active intentions).

8	1	P8.1a	The availability of adequate resources and appropriate-effective mechanisms to deal with the crisis provides a perception of controllability that is essential for instigating a transformational change. This is because, it complements the already accepted obligation to exert the necessary change effort (Aspect of Urgency), and, thus, it consolidates responsibility for action which is “materialized” through the adoption of problem focused (active) coping strategies.	S(P8.1a)	The availability of adequate resources and appropriate-effective mechanisms to deal with the crisis provides a perception of controllability that is essential for instigating a transformational change. This is because, 1. it complements the already accepted obligation to exert the necessary change effort (Aspect of Urgency), and, thus, it consolidates responsibility for action 2. which is “materialized” through the adoption of problem focused (active) coping strategies.
		P8.1b1	Controllability is realized through the evaluative dimension of coping potential, which can be broken down into the sub-dimensions of “Assess Situational Control” and “Evaluate change efficacy” that respectively consider whether: 1. The issue at hand is under management’s decisional control, given the characteristics of the situation 2. Exercising control and implementing change effectively is possible, given the collective capability of the company and its members.	S(P8.1b1)1	Controllability is realized through the evaluative dimension of coping potential, which can be broken down into the sub-dimensions of “Assess Situational Control” and “Evaluate change efficacy” that respectively consider whether:
				S(P8.1b1)2	1. The issue at hand is under management’s decisional control, given the characteristics of the situation
				S(P8.1b1)3	2. Exercising control and implementing change effectively is possible, given the collective capability of the company and its members.
		P8.1b2	Controllability is realized upon the sequential reflective evaluations of "Control check", which allows leaders to consider a wider range of alternatives for coping, and “Manageability”, which increases readiness and, thus, motivation for change. The former works as prerequisite so that the latter can exploit the potential of	S(P8.1b2)	Controllability is realized upon the sequential reflective evaluations of 1. "Control check", which allows leaders to consider a wider range of alternatives for coping (prerequisite for maximum efficacy 2. and “Manageability”, which increases readiness and, thus, motivation for change

			maximum efficacy regarding the respond to the crisis.		
	P8.1c1	The formulation of the essential perception of controllability presupposes, rather contradictorily, the acceptance of an initial sense of uncontrollability (sadness) & uncertainty (fear), which is caused by the chaotic nature of a crisis, and refers to the inability of the current organizational paradigm to cope and deal effectively with it (Innate uncontrollability).	S(P8.1c1)	The formulation of the essential perception of controllability presupposes, rather contradictorily, the acceptance of an initial sense of uncontrollability (sadness) & uncertainty (fear), which is caused by the chaotic nature of a crisis, and refers to the inability of the current organizational paradigm to cope and deal effectively with it (Innate uncontrollability).	
	P8.1c2	By accepting the crisis and the urgency to respond now, leaders realize the imminent chaos and, therefore, formulate a motivational impulse that calls for the restoration of order and structure in the system-organization. The way this restoration will occur depends on how the two evaluative sub-dimensions of coping potential will shape the already formulated (Urgency check) intentions for action, the final form of which will be reflected in agency thinking, and, thus, in a specific kind of hope (emotional response).	S(P8.1c2)1	By accepting the crisis and the urgency to respond now, leaders realize the imminent chaos and, therefore, formulate a motivational impulse that calls for the restoration of order and structure in the system-organization.	
			S(P8.1c2)2	The way this restoration will occur depends on how the two evaluative sub-dimensions of coping potential will shape the already formulated (Urgency check) intentions for action, the final form of which will be reflected in agency thinking, and, thus, in a specific kind of hope (emotional response).	
	P8.1c3	The innate uncontrollability is threatening for the leader's ego. How this threat and its concomitant aversive emotionality are regulated, determines the adaptive or maladaptive nature of the generated emotional response of hope.	S(P8.1c3)	The innate uncontrollability is threatening for the leader's ego. How this threat and its concomitant aversive emotionality are regulated, determines the adaptive or maladaptive nature of the generated emotional response of hope.	
	P8.1c4	Adaptive hope takes the form of yearning for a better future and exclusively escorts the uncertainty of the decision to change, while	S(P8.1c4)	In general, adaptive hope takes the form of yearning for a better future and exclusively escorts the uncertainty of the decision to change, while maladaptive hope	

			maladaptive hope enhances irrational beliefs in status quo's viability and justify the leaders' reluctance to let go of any old commitments (defensive).		enhances irrational beliefs in status quo's viability and justify the leaders' reluctance to let go of any old commitments (defensive).
		P8.1c5	Coping potential as a response to the innate uncontrollability of a crisis applies only when causal responsibility has been attributed internally, as an external attribution reduces provides a sense of order by locating the source of the problem.	S(P8.1c5)	Coping potential as a response to the innate uncontrollability of a crisis applies only when causal responsibility has been attributed internally, as an external attribution reduces provides a sense of order by locating the source of the problem.
	2	P8.2a1	The intuitive mind appraises (Anchored controllability) not only the controllability of the case (Dimension of Modifiability) but also the need to actively exercise control (Dimension of Changeability), which generates the necessary, yet susceptible to defensiveness, motivation for action.	S(P8.2a1)	The intuitive mind appraises (Anchored controllability) not only the controllability of the case (Dimension of Modifiability) but also the need to actively exercise control (Dimension of Changeability), which generates the necessary, yet susceptible to defensiveness, motivation for action.
		P8.2a2	P7.2a2: Defensiveness could potentially occur due to an ego-threat that is produced by the dimension of modifiability, which, by entailing the past, enables the realization that the current status quo is incapable of exerting control over the crisis (Innate uncontrollability that needs regulation).	S(P8.2a2)	P7.2a2: Defensiveness could potentially occur due to an ego-threat that is produced by the dimension of modifiability, which, by entailing the past, enables the realization that the current status quo is incapable of exerting control over the crisis (Innate uncontrollability that needs regulation).
		P8.2b1	An unregulated threat that comes from the inability of the current organizational processes and structures to exert control over the faced crisis can trigger the defence mechanism of "Heteronomous compensation of control", which allow the individual to construct an imaginary	S(P8.2b1)	An unregulated threat that comes from the inability of the current organizational processes and structures to exert control over the faced crisis can trigger the defence mechanism of "Heteronomous compensation of control", which allow the individual to construct an imaginary system-reality that will compensate the low

			system-reality that will compensate the low levels of control by ascribing a pre-established and irrefutable-absolute meaning to the chaotic crisis.		levels of control by ascribing a pre-established and irrefutable-absolute meaning to the chaotic crisis.
	P8.2b2	The invoked system will justify the status-quo, and, thus, eliminate the need for taking action, by: 1. Making it seem as what it should actually be, given that what challenges its ability to exert control is, or at least is shaped by a reality that lies, beyond the things that humans can actively influence 2. Providing an excuse for causal responsibility in the sense that leader's choices, which are accepted to have brought the crisis, are the only possible ones, given the existence of the unchanged imaginary reality 3. Offering a construct on which blame for any future failure can be placed (self-handicapping), despite the fact that active action has not been taken.	S(P8.2b2)	The invoked system will justify the status-quo, and, thus, eliminate the need for taking action, by: 1. Making it seem as what it should actually be, given that what challenges its ability to exert control is, or at least is shaped by a reality that lies, beyond the things that humans can actively influence 2. Providing an excuse for causal responsibility in the sense that leader's choices, which are accepted to have brought the crisis, are the only possible ones, given the existence of the unchanged imaginary reality 3. Offering a construct on which blame for any future failure can be placed (self-handicapping), despite the fact that active action has not been taken.	
	P8.2c1	An appraisal of human control makes the leader to emancipate him/herself from the existing order, which is viewed as obsolete, and with desire undertake the challenge for active action as this is imposed from the need to change.	S(P8.2c1)	An appraisal of human control makes the leader to emancipate him/herself from the existing order, which is viewed as obsolete, and with desire undertake the challenge for active action as this is imposed from the need to change.	
	P8.2c2	Human control of an internally attributed case will promote the completion of the emotional experience of shame/guilt, which will make the leader to accept full causal responsibility for the crisis and, thereby, proceed to remedial action.	S(P8.2c2)	Human control of an internally attributed case will promote the completion of the emotional experience of shame/guilt, which will make the leader to accept full causal responsibility for the crisis and, thereby, proceed to remedial action.	

		P8.2c3	Human control over an externally attributed case will promote the emotion of anger, which prepares the leader for taking action in order to protect the personal and organizational goals that have been offended by the external attack.	S(P8.2c3)	Human control over an externally attributed case will promote the emotion of anger, which prepares the leader for taking action in order to protect the personal and organizational goals that have been offended by the external attack.
		P8.2c4	An appraisal of situation control creates the perception that despite the inability of the current paradigm to deal with the problem, there is no alternative way of organizing, as the faced crisis is an outcome of an extra-social reality that cannot be influenced by human activity, and, thus, needs to be passively accepted.	S(P8.2c4)	An appraisal of situation control creates the perception that despite the inability of the current paradigm to deal with the problem, there is no alternative way of organizing, as the faced crisis is an outcome of an extra-social reality that cannot be influenced by human activity, and, thus, needs to be passively accepted.
		P8.2c5	The accepted inability to actively deal with the faced crisis could lead to despair, yet leaders will utilize the external system to generate the emotion of transcendental hope, which allows them to become critical of the extra-social reality that seems to prevent the otherwise accurate schematic beliefs from being deployed, and to believe in and passively anticipate the "somehow" self-resolution of the crisis.	S(P8.2c5)	The accepted inability to actively deal with the faced crisis could lead to despair, yet leaders will utilize the external system to generate the emotion of transcendental hope, which allows them to: 1. Become critical of the extra-social reality that seems to prevent the otherwise accurate schematic beliefs from being deployed 2. Believe in and passively anticipate the "somehow" self-resolution of the crisis.
	3	P8.3a1	In the intuitive mind the collective capability of the company and its members to manage the crisis is realized through an appraisal of "Power concerns", the basic dimension of which reflects the respective conscious evaluation of manageability by evaluating the "potential" power (relational) to cope with the crisis at hand.	S(P8.3a1)	In the intuitive mind the collective capability of the company and its members to manage the crisis is realized through an appraisal of "Power concerns", the basic dimension of which reflects the respective conscious evaluation of manageability by evaluating the "potential" power (relational) to cope with the crisis at hand.

		P8.3a2	<p>The capability of the company to manage the crisis will only be perceived as long as its collective premise, which is manifested to the leader as an inability to cope with the chaotic nature of a crisis solely based on his/her own heroic actions, is accepted. That is, a resolution to a crisis requires from autonomous working teams, the free operation of which is facilitated by top leaders, to cooperate and construct a new meaning that will shape the new organizational reality.</p>	S(P8.3a2)1	<p>The capability of the company to manage the crisis will only be perceived as long as its collective premise, which is manifested to the leader as an inability to cope with the chaotic nature of a crisis solely based on his/her own heroic actions, is accepted.</p>
				S(P8.3a2)2	<p>A resolution to a crisis requires from autonomous working teams, the free operation of which is facilitated by top leaders, to cooperate and construct a new meaning that will shape the new organizational reality.</p>
		P8.3b1	<p>Along with the “potential” power (relational) to manage the faced issue, the intuitive appraisal of power concerns evaluates the “actual” interpersonal power (own) as this is shaped by the social aspects of the crisis.</p>	S(P8.3b1)	<p>Along with the “potential” power (relational) to manage the faced issue, the intuitive appraisal of power concerns evaluates the “actual” interpersonal power (own) as this is shaped by the social aspects of the crisis.</p>
		P8.3b2	<p>Leaders who follow the prevailing social norm and embrace the “heroic” view of their role will experience an ego-threat that needs to be regulated for transformational change to occur. This is based on the fact that the collective premise of a response to a crisis reduces the ability of the leader to produce the desired effects via direct personal control and calls for the equal redistribution of power to lower levels.</p>	S(P8.3b2)	<p>Leaders who follow the prevailing social norm and embrace the “heroic” view of their role will experience an ego-threat that needs to be regulated for transformational change to occur. This is based on the fact that the collective premise of a response to a crisis reduces the ability of the leader to produce the desired effects via direct personal control and calls for the equal redistribution of power to lower levels.</p>

		P8.3b3	P7.3b3: Leaders who do not abolish commandism will realize the crisis as a threat to their positional power (maladaptive). In such cases, they can engage in “Heroic Reactance”, which substitutes the low levels of “control to” heroically accomplish the change process with the exercise of “authority over” the general environment and, thereby, regulates the experienced aversive emotionality and its concomitant ego-threat.	S(P8.3b3)1	Leaders who do not abolish commandism will realize the crisis as a threat to their positional power and, thus, will engage in “Heroic” reactance,
				S(P8.3b3)2	Heroic reactance substitutes the low levels of “control to” heroically accomplish the change process with the exercise of “authority over” the general environment and, thereby, regulates the experienced aversive emotionality and its concomitant ego-threat.
		P8.3c1	The evaluative dimension of change efficacy determines how the already formulated intentions for active action (experience of challenge) will be effectuated, so that recovery from shame/guilt can be achieved.	S(P8.3c1)	The evaluative dimension of change efficacy determines how the already formulated intentions for active action (experience of challenge) will be effectuated, so that recovery from shame/guilt can be achieved.
		P8.3c2	Leaders who engage in reactance will generate an emotional response of heroic hope, which formulates the illusion that overall control will be restored only when personal control is achieved. As a result, leaders escalate their belief in authoritarian practices, and, therefore, centralize control as well as over-concentrate power (rigidity).	S(P8.3c2)1	Leaders who engage in reactance will generate the emotion of heroic hope, which formulates the illusion that overall control will be restored only when personal control is achieved.
				S(P8.3c2)2	In heroic hope leaders escalate their belief in authoritarian practices, and, therefore, centralize control as well as over-concentrate power (rigidity).
		P8.3c3	Change initiatives under the paradigm of heroism will entail elements of aggression towards whatever prevents the realization of a self-originated resolution to the crisis. Thus, a false sense of urgency (Kotter’s approach) is very likely to emerge and drive the organization towards intangible fights.	S(P8.3c3)	Change initiatives under the paradigm of heroism will entail elements of aggression towards whatever prevents the realization of a self-originated resolution to the crisis. Thus, a false sense of urgency (Kotter’s approach) is very likely to emerge and drive the organization towards intangible fights.

		P8.3c4	High power over a trivialized crisis will generate the emotion of “Pragmatic hope”, which allows the leader to expect the successful resolution to the trivialized-minor problem within the realm of a rationality that is shaped by current practices and knowledge.	S(P8.3c4)	High power over a trivialized crisis will generate the emotion of “Pragmatic hope”, which allows the leader to expect the successful resolution to the trivialized-minor problem within the realm of a rationality that is shaped by current practices and knowledge.
		P8.3c5	High power over an externally attributed issue will generate the emotion of “Martyrial hope”, which refers to a wishful desire that the current status quo will manage to withstand and cope with the externally originated attack.	S(P8.3c5)	High power over an externally attributed issue will generate the emotion of “Martyrial hope”, which refers to a wishful desire that the current status quo will manage to withstand and cope with the externally originated attack.
		P8.3c6	High power over an accepted crisis that has been internally attributed, generates the emotion of “Democratic hope”, which indicates the catholic embracement of a crisis’s chaotic nature. According to this kind of hope the leader, not only rejects every absolute, but also feels a profound confidence in the democratic praxis to conceive and actualize a radically different future.	S(P8.3c6)1	High power over an accepted crisis that has been internally attributed, generates the emotion of “Democratic hope”, which indicates the catholic embracement of a crisis’s chaotic nature.
				S(P8.3c6)2	According to the democratic hope, the leader, not only rejects every absolute, but also feels a profound confidence in the collective praxis to conceive and actualize a radically different future.

Table. A list of evaluative propositions

6.2 Identify and contact the experts

The following presents a set of documents that have been used in order to approach, invite and inform the experts about the study. The documents below support the analysis made in section 2.3.2 (*step: Identify and contact the experts*).

Invitation letter to the experts

Dear (Title & Name)

My name is Evangelos Kitsos. I am a doctoral researcher at the department of Warwick Manufacturing Group at the University of Warwick in the United Kingdom. I am writing to invite you to participate in an expert opinion study to support the verification of a model that has been developed for the needs of the following research project:

“Instigating transformational changes: An interdisciplinary approach based on the appraisal theories of emotion”

The project sets out to identify why business-leaders avoid taking action when evidence issue an urgent appeal for change. Various theories from the fields of management, leadership and change (*management part*), as well as cognitive theories and appraisal theories of emotion (*psychology part*) were utilized in order to explicate the (basic) steps through which leaders evaluate and interpret the evidence that indicate the need for change when a crisis is faced. Based on these steps various psychodynamic and cognitive barriers have been analysed and the individual change process has been mapped. Please, refer to the attached document “**Introduction to the work**” for further information about the research question and the objectives of the study. Also, additional information can be sent on request.

The complexity of the research problem made clear that any potential solution was going to lie beyond the borders of the change management field. As a result, an interdisciplinary methodological approach has been adopted in order to bring closer ideas that lie in distinct and isolated disciplines, which led to the development of an interdisciplinary theoretical understanding of the problem under investigation. You have been identified as an established expert in at least one of the used disciplines or fields of study. Therefore, my supervisor and I would be honoured if you would like to offer your expertise as well as your general knowledge in order to review the theoretical framework of the current research. In particular, we would like to ask your opinion

regarding a set of propositions and evaluative criteria that were produced as an outcome of the interdisciplinary literature review. Please, refer to the attached document **“Participant Information Leaflet”** for further information about the study, what will be asked from you, and how various ethical considerations have been addressed.

We feel that your expertise and general knowledge would be extremely beneficial and we should be grateful if you would consider participating in the current study. In case you would like to contribute please inform us by email and we will forward to you all the necessary documents and instructions for the expert opinion study.

Lastly, if you know any other researcher who would like to be part of the current research project, please forward to us his/her contact details so that we may contact him/her.

Please do not hesitate to contact us if you require further information.

Yours Sincerely,

Evangelos Kitsos

PhD student

WMG

International Manufacturing Centre

University of Warwick

CV4 7AL

UK

Tel.: +44 (0) 7594974456

Email: V.Kitsos@warwick.ac.uk

Mr. Paul Roberts

Principal Fellow, Quality and Reliability

WMG Senior Tutor

WMG

Room 330

University of Warwick

Coventry

CV4 7AL

Tel.: +44 (0) 2476524240

Email: Paul.Roberts@warwick.ac.uk

PARTICIPANT INFORMATION LEAFLET

Study Title: **Instigating transformational changes: An interdisciplinary approach based on the appraisal theories of emotion**

Investigator(s): **Evangelos Kitsos (Researcher);**
 Mr. Paul Roberts (Supervisor)

Introduction

You are invited to take part in a research study. Before you decide, please take the time to read the following information.

(Part 1 tells you the purpose of the study and what will happen to you if you take part. Part 2 gives you more detailed information about the conduct of the study).

PART 1

What is the study about?

The current project sets out to identify why business-leaders avoid taking action when evidence indicates an urgent need for change. Various theories from the fields of management, leadership and change (*management part*), as well as cognitive theories and appraisal theories of emotion (*psychology part*) were utilized in order to explicate the (basic) steps through which leaders evaluate and interpret the evidence that indicate the need for change when a crisis is faced. Based on these steps various psychodynamic and cognitive barriers are analysed and the individual change process is mapped. You are asked to provide your expertise and review a developed literature-based theoretical construct.

Your participation is optional

It is entirely up to you to decide. If, after reading the provided information, you inform the researcher that your choice is to participate, a set of documents that you need to review will be sent to you (refer below). By returning them completed you are giving your consent for the information that you have supplied to be used in this study. You will be free to withdraw at any time, without giving a reason and this will not affect you or your circumstances in any way.

What will happen next if you decide to participate?

In case you agree to participate in this study the following will occur:

1. You will receive a PowerPoint which will present to you a set of figures-maps (designed in Office Visio) that illustrate the theoretical framework of this work.
2. Each part of these figures-maps will be accompanied by a brief explanation and a proposition (85 in total) that will be expressed as a set of simple and straightforward statements (1 to 3 statements for each proposition). These propositions reflect the step-based logic behind the conceptualization of the

interdisciplinary understanding, for which you will be asked to express your opinion on a five-point Likert type response format (Agree Strongly, Agree, Neither agree or disagree, Disagree, Strongly Disagree). Optionally, you can also comment and provide feedback on each proposition,

3. Once the evaluation of the propositions is completed, you will be asked to evaluate 10 criteria that aim to provide feedback on whether the proposed theorization was able to meet the requirements of a well-constructed theory
4. Note that the full thesis will be sent to you, so that you can refer to it in case you need further clarification on a specific part of the theoretical framework.
5. After the completion of the evaluation process, you will need to email back the PowerPoint to the researcher. You will be given 3 months to complete the evaluation process.

What are the possible disadvantages, side effects, risks, and/or discomforts of taking part in this study?

No possible disadvantages, side effects, risks and/or discomforts are expected to be experienced. It should be stated though that the completion of the evaluation process will take a considerable amount of time (*maximum 16 hours of work over 3 months' time*).

What are the possible benefits of taking part in this study?

No specific benefits are expected, apart from getting involved in what the researcher and his supervisor believe to be an interesting piece of work.

What will happen when the study ends?

Once the study ends, the data will be collected and securely stored in the researcher's password protected computers. The researcher will use this data in order to discuss the already produced theoretical construct, on which you provided your feedback, and, thereby, complete the PhD thesis. A copy of the completed thesis, and any associated publications, can be sent to you after request.

Will my taking part be kept confidential?

Yes. We will follow strict ethical and legal practice and all information about you will be handled in confidence. Further details are included in Part 2.

What if there is a problem?

Any complaint about the way you have been dealt with during the study will be addressed. Detailed information is given in Part 2.

This concludes Part 1.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

PART 2**Who is organising and funding the study?**

The PhD research has been funded by the Greek State Scholarship Foundation (IKY) and the department of Warwick Manufacturing Group.

What will happen if I don't want to carry on being part of the study?

Participation in this study is entirely voluntary. Refusal to participate will not affect you in any way. If you decide to take part in the study, you will be asked to respond to the email.

If you agree to participate, you may nevertheless withdraw from the study at any time without affecting you in any way. You have the right to withdraw from the study completely and decline any further contact by study staff after you withdraw. In such a case, you are kindly requested to inform the Chief Investigator (for contact details refer below).

What if there is a problem?

This study is covered by the University of Warwick's insurance and indemnity cover. If you have an issue, please contact the Chief Investigator of the study:

Evangelos Kitsos

Warwick manufacturing Group
University of Warwick
Coventry
CV4 8UW
Tel.: +44 (0) 7594974456

Paul Roberts

Principal Fellow
WMG
International Manufacturing Centre
University of Warwick
Coventry
CV4 7AL
UK

Email: V.kitsos@warwick.ac.uk

Tel.: +44 (0) 2476524240

Email: paul.roberts@warwick.ac.uk

Who should I contact if I wish to make a complaint?

Any complaint about the way you have been dealt with during the study or any possible harm you might have suffered will be addressed. Please address your complaint to the person below, who is a senior University of Warwick official entirely independent of this study:

Director of Delivery Assurance

Registrar's Office

University House

University of Warwick

Coventry

CV4 8UW

Complaints@Warwick.ac.uk

+44 (0) 24 7657 4774

Will my taking part be kept confidential?

Full anonymity and confidentiality will be kept and the data will be handled according to the university's [regulations](#). The researcher will not use any names in the Thesis or in any other situation. The emails that will be used for the purpose of communication between the participants and the researcher will be stored in the principal investigator's (Evangelos Kitsos) computer (only), which will be password protected and, therefore, only he will have access to the non-anonymized data. Lastly, the non-anonymized data will be destroyed after the completion of the study.

What will happen to the results of the study?

The results of the study, will be used in order to complete the thesis and produce relevant academic papers. Such papers will be either submitted to academic journals for publication or used in conferences. In any case, full anonymity and confidentiality will be kept.

Who has reviewed the study?

This study has been reviewed and given favourable opinion by the University of Warwick's Biomedical and Scientific Research Ethics Committee (BSREC): REGO-2015-1626; approved on 13th of October 2015.

What if I want more information about the study?

If you have any questions about any aspect of the study or your participation in it not answered by this participant information leaflet, please contact:

Evangelos Kitsos

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University of Warwick

Coventry

CV4 8UW

Tel.: +44 (0) 7594974456

Email: V.kitsos@warwick.ac.uk

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Email: paul.roberts@warwick.ac.uk

Thank you for taking the time to read this participant information leaflet.

Introduction to the work

Instigating transformational changes: An interdisciplinary approach based on the appraisal theories of emotion

1. Background literature & the research question

It is widely accepted that in order to survive and prosper within the contemporary unprecedented pace of environmental change (*By, 2005*), organizations have to infuse a change mentality in their systems (*Bruke, 2006:15*). As a result, research and teaching on change management has been considerably increased during the last decades (*Mills, 2003; Mills, Dey & Mills, 2008*). If, however, theorists pay so much emphasis on designing methods and tools that can facilitate organization to change and face the problems of the new era as well as improve their performance, why is there a mismatch between what science knows and what (*plenty of*) companies do (*i.e. Moreno & Gitlow, 1999*)? This question seems to remain unanswered by the already existing literature on the potential causes of failure during the change *process* (*i.e. Eaton, 2010; Lucey,*

2008). As a result, additional research on identifying what prevents transformational and major changes from being instigated in first place seems a promising and interesting research area.

A review of twenty-three change models in the literature demonstrated that the awareness of a need or a problem is the first and essential step for instigating a change program. That is, according to the current view, a change agent or a team of change agents, who realize the need for change, deploy the compelling evidence at the executive level in order to persuade the organizational leaders to authorize change. This is believed to be achieved by the ability of the compelling evidence to establish a sense of urgency and, thereby, set leadership in favour of change (*Kotter, 1996; 2008*). Indeed, urgency is a diachronic and essential requirement for a change to occur (*Appelbaum, Habashy, Malo & Shafiq, 2012; Guzman, et al. 2011; Quinn, et al. 2012*). However, it seems that the general assumption that initially a need is identified and, then, a sense of urgency is created and change occurs suffers from bias which probably is attributed to its anecdotal support (*Whelan-Berry, Gordon & Hinings, 2003*). There have been cases, either academically reported (*Dunn 2009; Kitsos, 2011*) or not, that indicate the existence of organizations which react with complacency even if they face extinction (*Clark, 2010*). Even when a compelling need is obvious for company's employees and urgency has been established, dismissive leaders can still see no reason to change and will adhere to the current status quo (*Hoag & Ritschard, 2002*). As a result the following research question has been developed:

“What barriers inhibit senior management to accept the need for change and commit to action when urgency has been established?”

2. Aims/Objectives:

Compelling needs are realized through information, which leaders analyse and decide to authorize action (*change as a decision making process in Liu & Perrewé, 2005*). In order for this action to take place, and, thereby, an OC to be instigated, a mental shift or else a revised mental model regarding how leaders perceive and act in respect to a specific issue is necessary (*George & Jones, 2001; Senge, 2006*). Apparently, then, the preliminary aim of this work is:

To explain the process according to which leaders' analyse information that indicate the need for change and revise their mental models whenever this is necessary.

Cognitive psychologists suggest that the construction of mental models is guided by minds' abstract cognitive structures, called schemas (*Lipshitz & Shaul, 1997:293*), based on which individuals interpret information (*Ikiuga, 2007:63*) and "store" their knowledge about the world (*Michon, 1986:55*). When a change agent introduces the need for a new initiative, people in the company, in this case leaders, will have their existing schemas, and, consequently, their mental models, challenged (*Weber & Manning, 2001*). The result of such a challenge needs to be a revised mental model and, thus, a new understanding of the case at hand which will, ultimately, lead to the initiation of different actions and responses on leader's behalf (*Cameron & Green 2004:21*).

“Objective 1: Research within the general scope of schematic information processing how schemas change and construct an altered mental model.”

This challenge places individuals in an emotionally unstable state, in which they try to make sense of the new by modifying and adapting their pre-existing schemas (*Bartunek, Balogun & Do, 2011*).

“Objective 2: Establish the basic cognitive – emotional principles that underpin the schema change process at individual level”

Schemas do not accept passively the need for change when they face evidence discrepant to their existing beliefs (*sec. 3.2.1*), but, due to their inherent resistance qualities (*Arzenšek, 2011; Larson, 1994*), could halt the change process.

“Objective 3: Determine the barriers that prevent leaders from perceiving and accepting the need for change”

Someone could argue that when the compelling evidence for change is identified and accepted it is obvious that change is the only way. Definitely, awareness and acceptance of a need is an essential factor for developing commitment to change (*Jaros, 2010*), yet, schema-change may not occur even if the need is identified (*i.e. George and Jones, 2001*).

“Objective 4: Determine the barriers that prevent leaders from committing to action”

Given that it is the application of a theory that may cause its revision (*Deming, 1994:103*), the theoretical recommendations will have to be verified.

“Objective 5: Verify the theoretical recommendations and revise them based on the analysis of the feedback”

3. The reason why you have been contacted

The complexity of the research problem made clear that any potential solution was going to lie beyond the borders of the change management field. In these cases, the interdisciplinary research becomes a useful methodology, since it brings closer ideas that lie in distinct and isolated disciplines (*Rhoten & Parker, 2004*). The researcher adopted this methodology (*for further analysis see Repko, 2006; 2009*) and by reviewing the literature in the relevant disciplines and fields of study managed to develop an interdisciplinary understanding of the problem (*objectives 1, 2, 3*), which had then to be verified (*objective 4*). On this basis, I feel that your expertise and knowledge would be extremely beneficial so that the final objective of this study can be brought into effect. Therefore, I would like to welcome you to participate in the study.

6.3 Ethical Considerations

The following is a list of ethical issues that have been considered within the scope of this work.

1. Informed Consent

In the initial email that will be sent to the participants-experts, the researcher will provide information about the aim of the research and what their exact role is expected to be (*attached document: Participant Information Leaflet-Evangelos Kitsos-1058919*), and will ask the experts to reply and state whether they agree or disagree to participate in the study. On this basis, they will be informed that a positive response to the email-invitation suggests their fully informed consent to participate (*attached document: Consent form-Evangelos Kitsos-1058919*).

2. Participant Confidentiality and Data Security

Full anonymity & confidentiality will be kept and the data will be handled according to the university's [regulations](#). The researcher will not use any names in the Thesis or in any other situation. The emails that will be used for the purpose of communication between the participants and the researcher will be stored in the researcher's computer (only), which will be password protected and, therefore, only the principal investigator (Evangelos Kitsos) will have access to non-anonymized data. Also, the non-

anonymized data will be destroyed (erased from the researcher's personal computer) after the completion of the study.

3. Right of Withdrawal

Participants can withdraw from the study at any time. In such a case, the participant will be asked to inform, via email, the researcher who in his turn will, in case it is requested, erase any data that the participant has provided.

4. Benefits and risks

The main benefit from participating in the study is the engagement with what the researcher and his supervisor consider to be an interesting piece of work. Once they agree to participate, experts will receive the actual thesis with the research findings up to this point, since this is necessary for the completion of the evaluation process. In addition, a summary report once the research is completed and the PhD has been awarded will be sent as well. Finally, no risks are expected, apart from potential issues with participant confidentiality & data security that have already been addressed above.

5. Dissemination and Implementation

The results will potentially be presented in conferences or used in order to publish academic papers. The participants will be informed about it and will be asked whether they want a copy of the produced paper.

No issues or risks are expected to arise as a result of the dissemination of the research findings, as there are no limitations or restrictions from any kind of stakeholder. That is, the publication of the results will follow the normal process and will be published as part of the overall thesis in a coded form that will ensure anonymity and confidentiality.

Appendix 7: Leadership expertise and schema change

This appendix provides further elaboration on the point made in sec. 11.7.2. In particular, it will try to explain how future research can investigate about individual characteristics and traits in order to identify the vulnerable evaluations that will be more prone to appraise maladaptively the compelling evidence in a specific case.

7.1 Expertise and cognitive rigidity

Following *George and Jones (2001)*, it can be argued that the defence of selective attention is more likely to happen in the case of experts. In a broad sense, an expert is someone who possesses extraordinary skill and knowledge, acquired and nourished through practice and experience, regarding a specific domain (*Sternberg & Grigorenko, 2003:157*). While it can be assumed by definition that experts could achieve superior performance compared to novices, despite its importance, expertise doesn't lack limitations (*i.e. Adelson, 1984; Lewandowsky, Little & Kalish, 2007:84; Lewandowsky & Thomas, 2009*). One limitation, which seems to be of major importance for this work, is experts' inflexibility to adjust their knowledge basis and performance in the light of novel information (*Adelson, 1984:84*). Specifically, experts utilize their schemas to conceptualize and represent their knowledge regarding various features within their domain of expertise (*Hoffman, 1998*). Inflexibility occurs because once schemas get developed and become well established, like in the case of experts, their change is difficult (*Huff, Huff & Barr, 2000:48*). That is, the continuous validation and upgrade of a schemas leads to automatic processing of information and hinder flexible thinking and creativity, which both are essential when tasks' demands change and thus contradict established knowledge (*Frensch & Sternberg, 1989*). This is why, when novel problems, or general environmental changes, make already developed cognition obsolete and require different and new responses for their solution, experts could face problems of adaptation (*Canas, Quesada, Antolí & Fajardo, 2003; Chi, 2006:26*). It is apparent, therefore, that the problem of expertise applies when individuals are and remain in an automatic state of cognition.

It should be clarified that expertise is not synonymous with inflexibility. Studies have shown that it is easier for experts, compared to novices, to abolish pre-established schematic rules when they come up against a new schematic perspective (*Bartunek, Lacey & Wood, 1992*). This is because their well-defined schemas can efficiently trace discrepant information that violate their expectations (*Palmer & Pickett, 1999*), and

consequently detect potential problems (Klein, Pliske, Crandall & Woods, 2005). Apart from the fact that the appraised negative valence of the evidence could drive the leader to respond defensively (sec. 3.2.1), Dane (2010) sheds some additional light to this controversy. He argued that expertise is indeed a main cause of inflexibility, yet, an expert who operates in a dynamic environment and engages in outside-domain activities can avoid “cognitive entrenchment”. Under these conditions, experts-leaders develop a pluralistic and multidimensional perspective for perceiving reality, which enables them to use their rich expertise resources not as an anchor for clinging to the status quo but as a vaulting point for embracing novelty and developing new ways for responding to the environmental needs (George & Zhou, 2001; Wang & Chan, 1995). Essentially, this kind of leaders do not possess the characteristics of dogmatism and reticence to new experience which are highly associated with the phenomenon of resistance to change in general (Oreg, 2003) and schema change in particular (Lau & Woodman, 1995).

While it could be argued that by indicating to an expert the need for a different way of thinking would have been enough, it seems that this is not the case. Wiley (1998) demonstrated that experts insist “on their way” even when they are told about their methods and knowledge’s inadequacy to solve a problem. Similar results were highlighted by Hinds (1999) who tried, through a presentation, to facilitate improvement of experts’ estimations regarding novices’ performance in a specific task. His assistance was fruitless since it had no significant alteration on experts’ estimations, as they used their “usual practices” to assess novices. Both studies indicate that it is difficult for experts to consider a different point of view and change their minds when it is necessary (Schraw, 2012:259). Apparently, this experts’ propensity to insist on their ways, provides a reasonable explanation regarding why change agents could face deaf ears and responses like “Do not confuse me with facts my mind is made up”, even in the light of clear compelling evidence.

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